JUNE
1956

- BUILDING A PANORAMIC ADAPTOR
- CONTEST RESULTS
- TWO METRES, BUT HOW!
- AMATEUR CALL SIGNS

Amateur Radio

WIRELESS INSTITUTE OF AUSTRALIA

1/-

Registered at G.P.O., Melbourne, for transmission by post as a periodical

"HAM" RADIO SUPPLIERS

(KEN MILLBOURN, PROP.)

Bargains Galore - - Compare These Reduced Prices

NOTE THESE VALVE PRICES

Look at these Bargain Priced NEW VALVES—

1A5	2/6	6K7G	7/6	7C7	2/6	957	10/-
1B5	2/6	6K8	15/-	7E6	5/-	1625	£1
1H5	10/-	6L7	10/-	7W7	5/-	5763	25/-
1K4	5/-	6L7G	7/6	12SJ7	10/-	6146	70/-
1K5	10/-	6N7	10/-	12SK7	10/-	EF50	10/-
2A3	10/-	6N8	15/-	12SQ7	2/6	RK34	7/6
2A5	10/-	6Q7G	5/-	12SQ7GT	2/6	RL18	15/-
2E26	60/-	6R7G	10/-	25AC5	10/-	VR75	15/-
3Q5	5/-	6SC7	10/-	807	20/-	VR90	15/-
6B8	15/-	6SF7	12/6	815	50/-	VR100	5/-
6C8	7/6	6SJ7GT	12/6	816	15/-	VR102	5/-
6E5	10/-	6SK7GT	12/6	834	£1	VR103	5/-
6F6	10/-	6SS7	12/6	884	£1	VT50	2/6
6J8	10/-	6U7	10/-	954	10/-	VT51	2/6
6K6	7/6	7A6	5/-	955	10/-	VT52	10/-

English VT127 (4v. power pent., 20 watt, octal base), 4/11

Full stocks of New Valves available. Prices on request.

Following list are ex Disposals, guaranteed—

1K5	5/-	5U4	12/6	6H6	5/-	12A6	10/-
1K7	5/-	6AC7	10/-	6SJ7G	10/-	12K8	10/-
1L4	5/-	6AG5	10/-	6SK7G	10/-	1625	15/-
1S5	10/-	6C5	10/-	6SL7	15/-	CV92	15/-
3A4	5/-	6C6	5/-	6SN7	7/6	EF50	5/-
		6D6	5/-				

THIS MONTH'S SPECIAL

PROJECTOR: Victor 16 mm., Sound, complete with Speaker and Step-down Transformer, £110.

Filament Transformers, 2.5v. 10 amp. c.t. for 866s, etc., also 65v. at 150 Ma., 6.3v. 1 amp., band new £2

Filament Transformers, 10v. 3 amp., 12.6v. 2 amp., 6.3v. at 300 Ma., brand new £2

Filament Transformers, 6.3v. 4 amp., 6.7 v. 4 amp., 6.7v. 4 amp. brand new £2

Filament Trans.: 230v. input; 3 taps 4v., 2 taps 4½v., 1 tap 5v., 1 tap 6.3v., 1 tap 12v., 1 tap 18v., at 10 amps., new, ... 50/-

Filament Trans.: 230v. input; 2 taps 8.5v. at 8 amps. 35/-

2.5v. or 4v. Filament Transformers ..... 15/- each

Filament Transformer, 10v. 3 amp., 5v. 2 amp., brand new, 30/-

Transformers, high amp., low voltage. Input volts 230, output volts 13-13.5-14-15, at sixty amps. £5

Step-down Transformers, 230v. to 80v.-90v.-100v. at 2.5 amp. Brand new £2/10/-

Power Transformers, 40 Ma., 250-0-250., 6.3v. 3 amp., new, 15/-

Bendix RA1B Power Supplies, 240 volt AC, 24v. at 1 amp. output 250v. HT ..... £5 each

Genemotor Power Supply, Type 16 SCR522, 24v. input, 150v. and 300v. output at 300 Ma. Includes relay, voltage regulator, etc. A gift at £1. Too heavy for postage.

2 uF. 1000v. block type Chanex Condensers 12/6

4 uF. 1000v. block type Chanex Condenser 12/6

Neon Indicators, B.C. base 2/6

AT5 Transmitters, less valves and dust covers £3

RAX Receivers, complete with valves, 150-1500 Kc., £16/10/-

Amer. Loran Receivers, contains 26 valves, 1 100 Kc. xtal, £15

BC733D Crystal Locked Receiver, 10 valves, 108-120 Mc., £5

SCR522 American Transceiver. Frequency: 100 to 150 Mc. In clean condition, less valves £10

Command Receiver Racks, twin, brand new in cartons, includes two relays, switches, phone sockets, etc. £1

Command Receiver Right-angle Drives 2/6

Command Receiver Flexible Drives, 12 ft. long 11/-

Command Modulator Chassis, less Valves 50/-

CRO Indicators, complete with 5BP1 CRO tube, six EF50s, one VR54, one 2X2 valve. Brand new, to clear £7/10/-.

AWB1 Wavemeter, Aust. high freq., 145 to 165 Mc., £5/17/6

Inter-Com. Units, English. Contains two valves, transformers, P.M.G. key switch, resistors, etc. To clear ..... 12/6 each

Shielded Cable with two 12-pin Plugs 7/6

Co-ax Connectors, Ampenol type, male and female ..... 7/6 pair

Co-ax, indoor type, cotton covered ..... 1/- yard

Co-ax Cable, any length, 50 ohms ..... 1/9 yard

Locktal Sockets ..... 1/6 each

Valve Sockets, ceramic, 5-pin 5/-

Relays, A.W.A. Aerial Change-over type, 12v. 15/-

English Carbon Mike Transformers, new 5/-

Meters—0-5 Ma., 1½ Ma. movement, 2" round type, new, 22/6

Meters—0-10 Ma. 2" round, Triplette, new 17/6

Meters—0-100 Ma. 2" square, scaled 0-300, new £1

Meters—0-150 Ma., 2" square, new 27/6

Meters—0-2.5 Amp. R.F., 2" square type, new 15/-

Meters—0-20v., 5 Ma. movement, 2" square type, new 15/-

Meters—AR7 Signal Strength Meters, new 45/-

LARGE STOCK OF CRYSTALS

100 Kc. R.C.A. Crystals £4

3.5 Mc. Marker Crystals, latest miniature type complete with socket £2/10/-

Amateur Band Crystals, any frequency £2

Gold Plated Marker and Commercial Crystals, price on request. Delivery in seven days.

Following is a list of Crystal Frequencies available for immediate delivery. £2 each—

2081.2 Kc.	5655.555 Kc.	7021.5 Kc.	7073.5 Kc.	7175 Kc.
2103.1 Kc.	5677.777 Kc.	7021.715 Kc.	7075 Kc.	7725 Kc.
2112.5 Kc.	5700 Kc.	7024 Kc.	7077 Kc.	8009 Kc.
2208.1 Kc.	5722.222 Kc.	7025 Kc.	7080 Kc	8011 Kc.
2218.7 Kc.	5744.444 Kc.	7028 Kc.	7100 Kc.	8155.714 Kc.
3382.5 Kc.	5750 Kc.	7028.5 Kc.	7106.7 Kc.	8161.538 Kc.
3500 Kc.	5892.5 Kc.	7032 Kc.	7110 Kc.	8171.25 Kc.
3535 Kc.	6450 Kc.	7032.6 Kc.	7120 Kc.	8176.923 Kc.
4096.6 Kc.	6850 Kc.	7035 Kc.	7121 Kc.	8182.5 Kc.
4285 Kc.	7004 Kc.	7040 Kc.	7125 Kc.	8183.5 Kc.
4495 Kc.	7005 Kc.	7042.65 Kc.	7126 Kc.	8317.2 Kc.
4535 Kc.	7010 Kc.	7045 Kc.	7130 Kc.	8320 Kc.
4540 Kc.	7010.7 Kc.	7047 Kc.	7134 Kc.	10.511 Mc.
5000 Kc.	7011.5 Kc.	7050 Kc.	7140 Kc.	10.515 Mc.
5050 Kc.	7011.75 Kc.	7053.5 Kc.	7145 Kc.	10.524 Mc.
5300 Kc.	7012 Kc.	7063 Kc.	7150 Kc.	10.530 Mc.
5360 Kc.	7016 Kc.	7064 Kc.	7156 Kc.	10.5465 Mc.
5456 Kc.	7018 Kc.	7068 Kc.	7162.5 Kc.	10.556 Mc.
5530 Kc.	7021 Kc.	7072 Kc.	7163 Kc.	12.803 Mc.
5633.333 Kc.			7174 Kc.	12.915 Mc.

5A MELVILLE STREET, HAWTHORN, VICTORIA

North Balwyn Tram Passes Corner, near Vogue Theatre. **Phone: WA 6465**

Money Orders and Postal Notes payable North Hawthorn P.O. Packing Charge on all goods over 10 lbs. in weight, 5/- extra.

JUNE — — — — 1956
Vol. 24 No. 6

MSS. and Magazine Correspondence should be forwarded to the Editor, "Amateur Radio," C.O.R. House, 191 Queen Street, Melbourne, C.1, on or before the 8th of each month.

Subscription rate in Australia is 12/- per annum, in advance (post paid) and A15/- in all other countries.

Wireless Institute of Australia (Victorian Division) Rooms' Phone Number is MY 1087.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI: Sundays, 1100 hours EST, 7146 Kc. and 2000 hours EST 56 and 144 Mc. No frequency checks available from VK2WI. Intrastate working frequency, 7125 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneously on 3573 and 7146 Kc., 56.6 and 146.25 Mc. Intrastate working frequency 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 0900 hours EST, simultaneously on 3560 and 14342 Kc. 3560 Kc. channel is used from 0915 hours to 1015 hours each Sunday for the W.I.A. Country hook-up. No frequency checks available.

VK5WI: Sundays, 1000 hours SAST, on 7146 Kc. Frequency checks are given by VK5MD and VK5WI by arrangements on all bands to 56 Mc.

VK6WI: Sundays, 0930 hours WAST, on 7146 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7146 Kc. and 3672 Kc. No frequency checks are available.

VK9WI: Sundays, 1000 hours EST, simultaneously on 3.5, 7, 14 and 144 Mc. Individual frequency checks of Amateur Stations given when VK9WI is on the air.

AMATEUR RADIO
JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

Published by the Wireless Institute of Australia,
C.O.R. House, 191 Queen Street,
Melbourne, C.1.

EDITORIAL

★

REGULATIONS

For the first time in many a long day the Postmaster-General's Department has directed to all Commonwealth of Australia licensed Amateurs a notice concerning amendments to the "**Handbook for Operators of Amateur Wireless Stations.**" Some previous amendments, which were never notified direct, were included in the 1954 edition of the Handbook.

Although the Department has been somewhat tardy in issuing notices of amendments to the "Handbook for Operators of Amateur Wireless Stations," in most cases the Australian Amateur has "heard" about the change as soon as it has been made public, but oft times gets the story wrong. The delay between the release of official changes and/or additions to Amateur Regulations by the W.I.A. and the official notification to individual Amateurs leaves much to be desired.

The fact that the W.I.A. negotiates with the Department for variations in existing regulations, or the inclusion of new ones affording more suitable operating conditions for the Australian Amateur, does not in itself constitute automatic advice to every Amateur in the Commonwealth since some are not members of the W.I.A. nor do they necessarily read the official journal—"**Amateur Radio.**" By the same token the Department is not under any provision of law to notify each and every Amateur so long as some formal notification appears in the Government Gazette. This may also appear in local daily newspapers for the better dissemination to those concerned.

This is not a foolproof way of ensuring that every Amateur has been notified of the change. There are, perhaps, some who choose to disregard notifications unless they are addressed to them personally from the Postmaster-General himself—that is of course if the change is one with which they disagree. A rumour of an agreeable change, however, is quickly passed by grapevine and acted on!

This position should never be permitted to arise! And yet the Department should not be expected to have to advise every single change to each Amateur immediately, any more than the Motor Transport Department should have to forward all licensed motorists a copy of changes in motoring regulations. The cost and time for so doing is not a fair burden to expect any State or Commonwealth Department to carry—and remember you pay the taxes to keep the Civil Service functioning.

What then can be done about it? The Government Gazette is not easily available to each and every Amateur—particularly those away out in rural areas. Notifications in the daily press are not written in a manner which conveys the legal information but are rather dramatised as a news item. The answer seems to be to officially transmit the information concurrently with its appearance in "**Amateur Radio.**" The Federal station, VK3WIA, has been granted higher power for the purpose of official broadcasts to Amateurs of Australia and the Mandated Territories and it is the intention to seek the approval of the Postmaster-General for this system to be officially recognised as the voice of information. Transmissions conveying official information would be radiated in all Amateur bands at regular intervals over a reasonable period of time so that ALL Amateurs should have cause to hear and accept.

FEDERAL EXECUTIVE.

THE CONTENTS

Building a Panoramic Adaptor

BY K. M. SAXON,* VK7AI

ONE of the most fascinating electronic devices to have around the Amateur shack is the panoramic adaptor. By means of this piece of equipment it is possible to produce on a cathode ray tube screen a visual presentation of the strength, frequency and type of signal over a predetermined range of frequencies, centred on the signal to which the communications receiver is tuned.

Panoramic reception first came into use during the last war as an aid to monitoring the h.f. spectrum, where it reduced the number of operators required to cover a given frequency range, as any suspicious signal appearing, even momentarily, on the screen could be tuned to and investigated. Also, it proved invaluable at Air Force base stations, where slightly off frequency transmissions from aircraft could be quickly seen.

In the Amateur Station its uses are numerous. Band scanning and watching for clear channels in which to call CQ are facilitated. Transmissions can be checked for depth of modulation and bandwidth, and such troubles as splatter, key clicks and parasitics are readily observed. With highly selective receivers it is extremely valuable when looking for c.w. or s.s.b. signals, as there is practically no possibility of tuning over a station when, momentarily, it is not transmitting. With aural reception by itself this can happen, even when a c.w. station is known to be near a certain frequency.

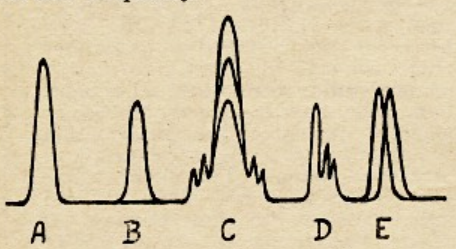


Fig. 1.—Presentation of Signals.

"A"—Unmodulated carrier. "B"—C.w. signal. "C"—Amplitude modulated signal. "D"—Single sideband suppressed carrier. "E"—Frequency shift keyed signal.

Often, too, it is possible to watch and identify the "v.f.o. swishers" who produce QRM by leaving their finals on when moving from one end of the band to the other.

In contest work it is almost indispensible, particularly with selective receivers. A known signal can be watched whilst searching for other signals, and the position of your own v.f.o. shows up instantly, thus netting is possible without even looking at the v.f.o. or receiver dials to see whether the v.f.o. has to be tuned higher or lower in frequency. The whereabouts of strong signals causing splatter can be seen and the signal which has just appeared several kilocycles away can be tuned to immediately and identified long before he has stopped calling CQ! Then, too, its effect on non-technical visitors is most impressive. They'll not forget it, nor will the technical visitor, who has not seen one before.

A separate receiver could be used for panoramic reception, but it is more economical and convenient to use a panoramic adaptor which is simply connected to the plate of the first mixer in the station receiver. Thus the one tuning system suffices for both aural and visual reception, giving the added advantage that the signal to which the receiver is tuned, normally appears in the centre of the screen.

PRINCIPLES OF THE PANADAPTOR

The essentials of the panadaptor are shown in the block diagram (Fig. 2). It consists of a superhet receiver having a broadband r.f. stage and a sharp i.f. stage, the tuning of the broadband r.f. stage being centred on the first intermediate frequency of the communications receiver. The oscillator is varied over the required range by means of a reactance tube modulator, and the detector output is amplified and fed to the c.r.t. display unit.

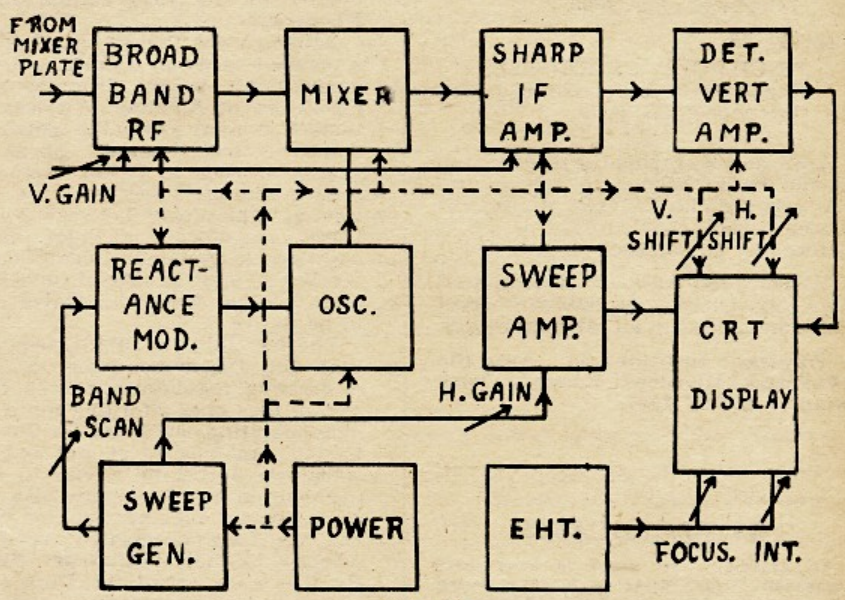


Fig. 2.

The bandwidth which can be scanned is controllable, from the maximum practicable bandwidth of the r.f. stage to zero. In this latter state, the panadaptor works as if it were an ordinary double conversion receiver and the audio content will appear on the screen, or can be monitored at the plate of the vertical amplifier.

In an ordinary superhet receiver, of course, to cover a band of frequencies, the h.f. oscillator is varied and, as the h.f. tuned circuits are not particularly selective, it is possible to cover a hundred kilocycles or so by tuning the oscillator alone. In normal use, a receiver oscillator is fixed in frequency at any one time, but in the panadaptor, the local oscillator is frequency modulated over the desired band. The band of frequencies thus swept by the panadaptor is selected by tuning the main receiver in the usual way.

To obtain a linear frequency deviation, the reactance tube is supplied with a voltage of linear sawtooth waveform. This varies the frequency from one end of the sweep range to the other, at a relatively slow constant rate, then it is quickly flicked back to start the cycle again. A repetition rate of at least 25 c.p.s. is required to prevent flicker on the screen and 50 c.p.s. is usually chosen, to be in synchronisation with the a.c. mains supply, and thus reduce hum effects.

The r.f. stage of the panadaptor is broadbanded to provide a reasonably flat response over the required range of frequencies, which is often about plus or minus 50 to 100 Kc. Often, the stage is given a rising characteristic towards the edges of the band to compensate for the falling characteristic of the front end of the receiver. The higher the first i.f. of the receiver, the easier it is to obtain the desired bandwidth.

The input is connected through an isolating resistor to the plate of the first mixer of the receiver as all signals passed by the bandwidth of the receiver r.f. stage appear here. It is preferable for the receiver to have only one r.f. stage, as more would cause greater attenuation towards the edges of the desired pass-band, particularly on the lower frequency bands.

The i.f. stage of the panadaptor should be as selective as practicable to give good definition and separation between signals.

The second detector output is fed to the vertical deflection plates of the cathode ray tube and gives a pattern

* C/o. Clifton Private Bag, Somerset, Tasmania.

as illustrated in Fig. 1, when the horizontal sweep is fed from the same sawtooth that drives the reactance tube modulator. The vertical amplifier is direct-coupled to prevent the base line of the c.r. tube pattern from moving downwards when a large number of strong signals is being displayed.

AUXILIARY USE

If there is no other modulation monitor in the station, it is a simple matter to instal a switch or a relay in the leads to the c.r.t. deflection plates so that they may be connected to the panadaptor circuits for reception, and to the transmitter r.f. output and modulating voltages during transmission for trapesoidal patterns. If modulation envelope patterns are desired, the 50 c.p.s. linear sweep could be used, in which case, only the leads to the vertical deflection plates would need to be switched.

THE CIRCUIT

The complete circuit diagram is given in Fig. 3.

A 6BA6 (V1) is used to give good gain in the broadband r.f. stage. Capacitors C35 and C36 serve to overcouple the two i.f. transformers.

The converter (V2) is a 6AN7. From an i.f. of, say, 455 Kc., when the sweep range is plus or minus 50 Kc., the signal input to the panadaptor will be between 405 and 505 Kc. To produce the adaptor i.f. of 175 Kc., the oscillator section of the converter must be varied over the range from 405 + 175 = 580 Kc. to 505 + 175 = 680 Kc., that is a centre frequency of 455 + 175 = 630 Kc. plus or minus 50 Kc. To do this a 6AC7 (V6) is used as a reactance tube modulator connected across the oscillator coil, L1.

The phasing network consisting of R25, R26 and C20, is fairly critical, the values given serving for 455 or 910 Kc. inputs. For 1600 Kc. input, C20 may need to be smaller in capacitance, or it may not be required at all. If this capacitor is too small, placing the reactance tube across the oscillator coil will seriously reduce the oscillator grid current.

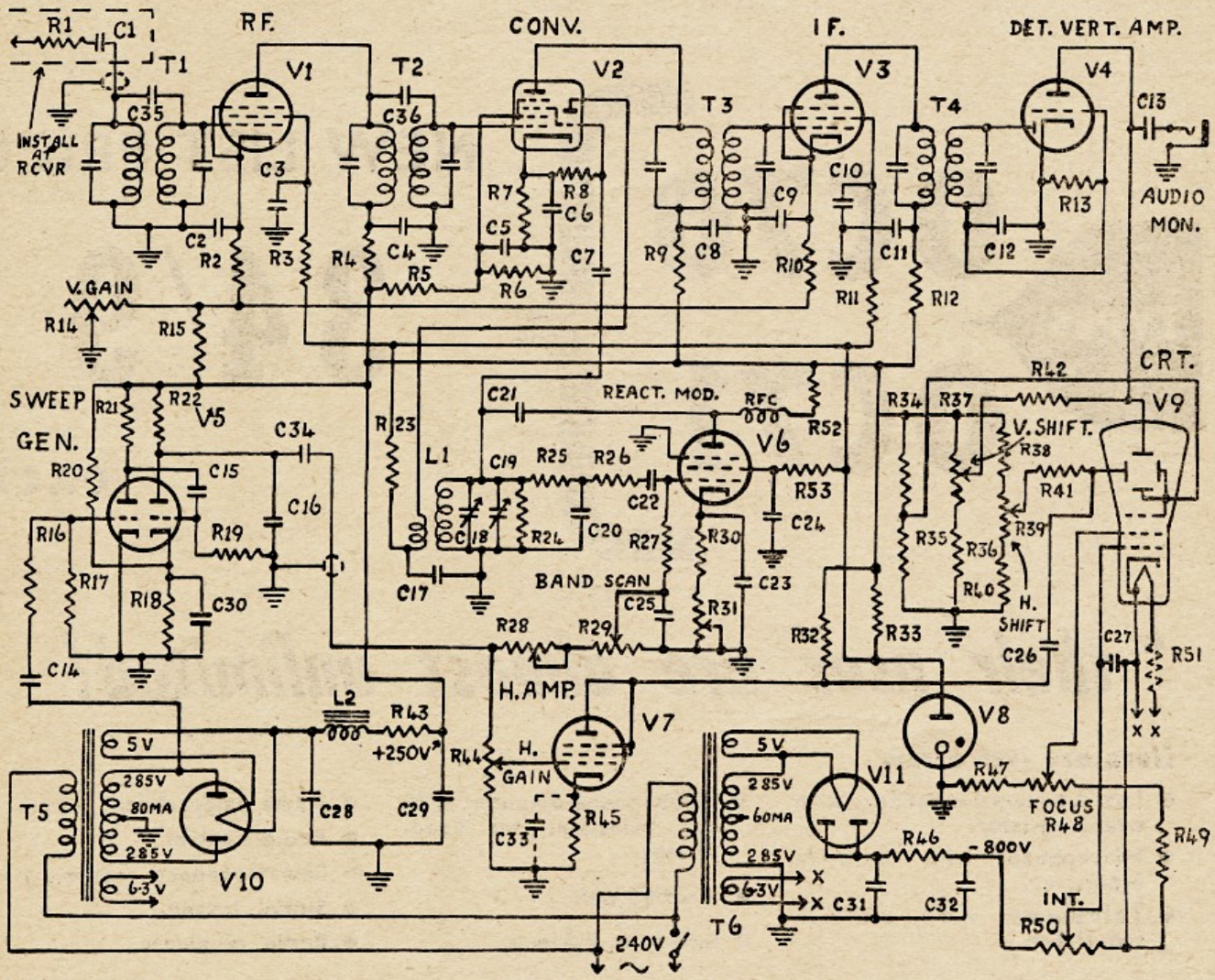


Fig. 3.

C1—0.001 uF. mica.
C2, C6, C8, C9, C10, C11, C23, C26—0.1 uF.
C3, C4, C5, C13, C17, C24—0.01 uF.
C7, C22—100 pF. mica.
C12, C15, C21—500 pF. mica.
C14—0.05 uF. 600v.
C16, C34—0.25 uF. 600v.
C18—150 pF. (see text).
C19—35 pF. variable, centring control.
C20—10 pF. mica or ceramic.
C25—250 pF. mica.
C27—0.5 uF. 400v.
C28, C29—16 uF. 600v.
C30, C33—25 uF. 25v.
C31, C32—1 uF. 1,000v.
C35, C36—50 pF. mica.
R1, R8, R24, R46—47,000 ohms.
R2—68 ohms.
R3—15,000 ohms.
R4, R9, R12, R53—2,200 ohms.
R5, R6—27,000 ohms.
R7—220 ohms.
R10—270 ohms.
R11, R25, R26—22,000 ohms.
R13, R15, R20, R32, R34, R35, R36, R38, R40, R42, R49—100,000 ohms.
R14—10,000 ohms w.w. potentiometer (H. gain).
R16, R17—1 megohm.
R18—5,100 ohms.
R19, R27—220,000 ohms.
R23, R52—10,000 ohms.
R28, R44—1 megohm potentiometers.
R29—100,000 ohm potentiometers (bandscan).
R30—100 ohms.
R31—5,000 ohms w.w. potentiometer.
R33—5,000 ohms 20w. w.w.
R37, R39—100,000 ohm pots., linear taper.
R41—2.2 megohms.
R43—1,000 ohms 20w. (adjust to give h.t. of 250v.).
R45—1,000 ohms 1w.
R47—470,000 ohms 2w.
R48—500,000 ohms potentiometer (Focus).
R50—50,000 ohms potentiometer (Intensity).
R51—Heater dropping resistor, if required.
RFC—13 mH. Eddystone r.f. choke.
L1—Oscillator coil (see text).
L2—15H. 80 Ma. filter choke.
T1, T2—I.f. transformers to suit receiver i.f.
T3, T4—175 Kc. i.f. transformers.
T5—285v. aside at 80 Ma.; 5v. at 2a.; 6.3v. at 2a.; 6.3v. at 2a.
T6—285v. aside at 60 Ma.; 5v. at 2a.; 6.3v. at 2a.
V1—6BA6.
V2—6AN7.
V3—6N8.
V4—6AV6.
V5—6SN7GT or 12AU7.
V6, V7—6AC7.
V8—VR150/30.
V9—VCR139; DG7-6 (or 5); 3BP1, etc.
V10, V11—5Y3GT.

The oscillator coil, L1, can be a b.f.o. coil for 455 Kc., a b.c. oscillator coil for 910 Kc., or a home-made one for 1600 Kc. Its inductance should be kept as high as practicable, by screwing the iron slug nearly right in, as then it is easier to obtain the required frequency deviation. The oscillator tuning capacitor, C18, can be either variable, or a fixed mica in parallel with a trimmer. Its value must be calculated or determined experimentally to suit the coil. C19 is a panel-controlled trimmer for centring purposes and for correcting for any drift in the receiver or panadaptor circuits.

If the adaptor is to be used with a receiver having a first i.f. of 1600 Kc., whether the oscillator is above or below this frequency will depend upon whether any of its harmonics fall in an Amateur band. Moving the oscillator to the other side of the input frequency may move the harmonics out of harms way, if the shielding doesn't eliminate them. Remember also, that the oscillator frequency varies plus or minus 50 Kc. No trouble should be encountered when using 910 Kc. or lower intermediate frequencies.

The linearity of the reactance tube is adjusted by means of R31 in the cathode circuit of V6.

The i.f. amplifier is quite conventional. A 6AV6 (V4) is used for the diode detector and vertical amplifier. As this is a high-mu valve, no bias is necessary in this application, and the grid is direct-coupled to the diode circuit. The plate is connected directly to the c.r. tube deflection plate and its load resistor R42 is taken to the vertical shift control R37 which is normally adjusted to place the baseline nearly half an inch below the centre of the c.r. tube screen.

The sawtooth generator, V5, uses a 6SN7. One half squares the 50 cycle a.c., which is then differentiated by R19 and C15, the short positive pulses thus obtained trigger the second section, which discharges the sawtooth capacitor C16. This capacitor charges exponentially through R22, the valve section being normally biassed beyond cut-off. The values used for R22 and C16 give a sawtooth of adequate linearity and amplitude. Other types of sawtooth generator could be used, but this circuit is reliable and easy to get going.

The horizontal amplifier V7 is a 6AC7 triode connected. No cathode by-pass is normally used, the degeneration thus produced provides better linearity. No great amplification is called for, as the output from the sweep generator is quite high, the major requirement being that the stage can supply adequate output voltage to give full linear deflection of the trace.

For the c.r. tube (V9) a three inch type is recommended. Two inch types hardly provide sufficient resolution, whilst five inch types take up too much space besides requiring push-pull horizontal deflection amplifiers and a higher anode voltage supply, but they are otherwise excellent. If a tube with other than a 6.3v. heater is to be used from a 6.3v. winding, a suitable dropping resistor, R51, will be needed.

Two receiver type transformers are used for the power supply. One, T6, utilises the full secondary voltage in a half wave circuit to provide the e.h.t. supply for the c.r. tube. This is one suggestion for obtaining the required voltage but any other suitable transformer and rectifier could be used.

As a refinement, retrace blanking could be applied to the c.r. tube, but this is not essential.

CONSTRUCTION

The panadaptor can be built on a 12" x 17" x 3" chassis with an 8¾" x 19" panel. Normal receiver construction practices are used throughout so no particular difficulty should be encountered by any Amateur who builds his own equipment.

Layout is not critical. The c.r. tube can be mounted centrally on the panel near the top edge. The transformers can be placed to the left of the chassis, the sweep generator, horizontal and vertical amplifiers in the centre under the c.r. tube, with the i.f. stage next and the r.f. stage on the right, placing the converter and reactance tube between the r.f. and i.f. stages and the panel.

If used with a BC348 series receiver, i.f. transformers can be adapted for the r.f. stage by removing turns from 455 Kc. transformers as well as reducing the tuning capacitance to about half.

The whole converter, oscillator and reactance tube circuits should be well shielded, particularly when used with the higher intermediate frequencies, to prevent radiation of harmonics.

A magnetic shield is desirable for the c.r. tube. Mu metal is best, but a length of water pipe, or two concentric shields made of light gauge sheet steel with about ⅛" spacing between the two would no doubt be satisfactory. As the sweep is synchronised with the a.c. supply frequency, any deflection caused by stray fields will remain stationary.

The shift, focus and intensity controls can be located symmetrically around the tube. The two gain controls, the bandscan control and the centring trimmer are mounted in a line about 1½" from the bottom edge of the panel. The intensity and focus potentiometers should be mounted on insulated brackets and driven through insulated couplings. All exposed potentiometer terminals should be insulated with tape or tubing; your life expectancy is thereby increased!

Connection to the receiver is by means of a length of co-axial cable. A co-ax socket can be mounted conveniently on the receiver, or if it is not desired to cut a hole in the receiver, the socket could be mounted on a bracket in a suitable place as close to the mixer as possible, R1 being connected straight to the plate pin of the mixer valve.

With a BC348 receiver, the co-ax socket can be placed near the top right hand corner of the dial where a resistor in the dial light circuit was mounted behind the panel. From there R1 and C1 are easily connected to the plate of the mixer.

A scale made from thin perspex and calibrated in kilocycles either side of centre can be placed over the screen. This also would serve to protect the screen from breakage.

ADJUSTMENT

After thoroughly checking the wiring, apply the h.t. to the c.r. tube and focus the spot at low intensity.

Now apply the h.t. to the receiver section and centre the spot by means of the shift controls. Adjust the horizontal gain to give a trace of suitable length and align the c.r. tube so that the trace is actually horizontal.

Next, line up the i.f. amplifier with a signal generator, using the c.r. tube as the indicator. (The trace should be deflected by any signal.) Make sure the vertical deflection is upwards. This may mean rotating the tube 180 degrees if one of the vertical deflection plates is connected to the second anode internally. The horizontal deflection should sweep from left to right, but in some tubes this may not be possible whilst still maintaining upwards vertical deflection. Where all plates are brought out to separate pins this difficulty will not arise.

Adjust R31 to provide about two volts positive at the cathode of the reactance tube, then set the oscillator to the correct centre frequency, with the sweep-scan control R29 turned right off. This frequency will be 630 Kc. for 455 Kc. input; 1085 Kc. for receivers of the BC348 series, or about 1600 Kc. plus or minus 175 Kc. if this should be the i.f. used in the receiver. This frequency can be checked by listening either to the fundamental or to a harmonic on a general coverage receiver.

Now check the reactance tube for correct frequency sweep and linearity. Turn R29 up about half way or so, and a raspy buzz should be heard in a receiver tuned to the oscillator frequency. Check to see whether this extends equally both sides of the centre frequency. If it does not, adjust R31. If linearity is poorer, the adjustment has obviously been in the wrong direction. Any adjustment of R31 will vary the oscillator frequency, which must be compensated for by C18.

Next, set sweep padder, R28, to give maximum desired frequency sweep with bandscan control, R29, at maximum.

Final adjustment of the i.f. amplifier can now be done by connecting the signal generator to the grid of V2, setting it to the receiver i.f. and turning the bandscan control to mid-position. The deflection which should appear on the screen represents the response curve of the i.f. amplifier. The i.f. transformers can be adjusted for maximum height, smoothest and narrowest shape of the curve.

Next thing is to align the broadband r.f. stage. The results obtained here depend largely on the i.f. transformers used. One method is to align all windings to the centre frequency, relying upon the overcoupling capacitors to produce the broadbanding. The recommended way is to tune the primaries slightly below the maximum frequency to be passed and the secondaries slightly above the lowest frequency to be passed. One adjustment will affect the other, which must then be re-checked.

If the variation in the tuning range of the transformers cannot be obtained by adjusting the slugs alone, the tuning capacitors will need to be decreased for the primaries and increased for the secondaries. If a portion of the new capacitance is made up by means of trimmers placed in an easily accessible position, alignment is considerably facilitated.

A 10 Kc. multivibrator is useful for these adjustments as it produces signals of equal strength every 10 Kc. across

Trail of wreckage left by the 1955 Maitland flood.

An Invisible Lifeline . . .

The worst flood in the history of the white man in Australia swept down the Hunter River Valley in early '55, causing death, privation and misery to thousands of people.

The death roll and property loss would have been even heavier but for the part radio — including "hams" in all parts of the State — played in rescue and relief work.

This "invisible lifeline" was operated from central emergency stations with equipment no bigger than the average radio cabinet.

Technicians used 10-watt and 3-watt frequency modulation equipment, making contacts up to 40 miles away.

As the water receded, radio men gave valuable assistance, before tele-communications were restored, by relaying messages and directions throughout the area.

Scientific developments are constantly helping radio men everywhere to improve their techniques and equipment.

SHELL research, for instance, has produced from petroleum special resins used for wiring, insulation and condenser sealers in every type of radio set.

the band, but by connecting the adaptor to the receiver, any signal of constant strength, such as the v.f.o., can be used, by tuning it across the band, by means of the receiver dial and adjusting the transformers of the broadband stage to maintain as nearly constant amplitude as possible.

INTERPRETATION OF SIGNALS

The interpretation of the signals is quite easy. An unmodulated carrier produces a deflection of constant amplitude, as shown in Fig. 1a. A c.w. signal produces an intermittent deflection as in Fig. 1b. A modulated carrier appears as a deflection of varying height, with the sidebands appearng as ragged edges to the curve as in Fig. 1c. With reduced bandscan the sidebands show up clearly.

Single sideband suppressed carrier signals are seen as very intermittent and irregular deflections of varying height as in Fig. 1d.

An f.m. signal appears as many deflections spreading over a variable bandwidth. When unmodulated, a single carrier appears, as with other unmodulated signals.

Frequency shift keying is easily recognised, as two carrier positions, slightly separated, are seen (Fig. 1e). Often, fading can be seen to be greater on one frequency than the other, even though they are only a few hundred cycles apart!

Noise from leaky power insulators, etc., is mainly in synchronisation with the sweep and therefore remains stationary on the screen.

One interesting feature is that an image signal will be seen to move in the opposite direction across the screen from that of normal signals and is easily identified.

Loran signals puzzle many listeners. These produce a peculiar and distinctive buzz in the receiver. On the panadaptor they can be seen as pips which drift across the screen at varying speeds, when the bandscan control is set at zero.

The amplitude of a strong signal will decrease towards the centre of the screen due to the a.v.c. action on the r.f. stage of the receiver. This will also cause the amplitude of all other signals presented to decrease.

Once having used a panadaptor, there is little chance that anyone would ever wish to be without one again.

AMATEURS PRESENT AT OPENING OF JOHN FLYNN MEMORIAL CHURCH

News has come to hand of some interesting mobile operations in the Northern Territory. Maurie Anderson (VK3AMA), with a couple of companions travelled to Alice Springs, via New South Wales and Western Queensland, to take part in the official opening ceremony of the John Flynn Memorial Church at Alice Springs on 5th May. Maurie's 40 metre mobile rig kept Melbourne Amateurs informed of his progress as their Landrover fought its way across the rugged "Back o' Bourke" country where Maurie renewed acquaintances made many years ago when he was one of the first radio operators of the Inland Flying Doctor Service.

While in the Northern Territory, Maurie maintained contact also with the Inland Mission under a special P.M.G. licence permit granted for the purpose. In Alice Springs he was heard from the station of VK5TL on the 7 and 14 Mc. bands.

It is interesting to recall that Australian Amateurs played a major role assisting the late Rev. John Flynn in the formation of the radio communications service for the Inland Mission. South Australian Amateur Alf Traeger, who held the calls VK5AX and VK8XT, developed the first pedal radios for the outback service in 1928. Early tests were made from VK8XT with the late Harry Kauper (then VK5BG), and Amateurs throughout Australia also co-operated.

In appearance the machine was similar to a typewriter keyboard, with a shortwave receiver and transmitter and sent out the appropriate morse signals whenever a letter key was depressed, the power being supplied by a small pedal generator. It enabled families living in isolation, possessing no radio knowledge and with no source of electric power available, to keep in touch with civilisation or to request medical aid when necessary. Over the years the design of the sets has been improved and Alf Traeger still supplies the Mission with communication equipment.

Australia will always remember Flynn and his associates for their humane and enterprising hard work which has provided the outback people with a service unique in the world.

— · · · —

HINTS AND KINKS

POLYTHENE SPREADERS

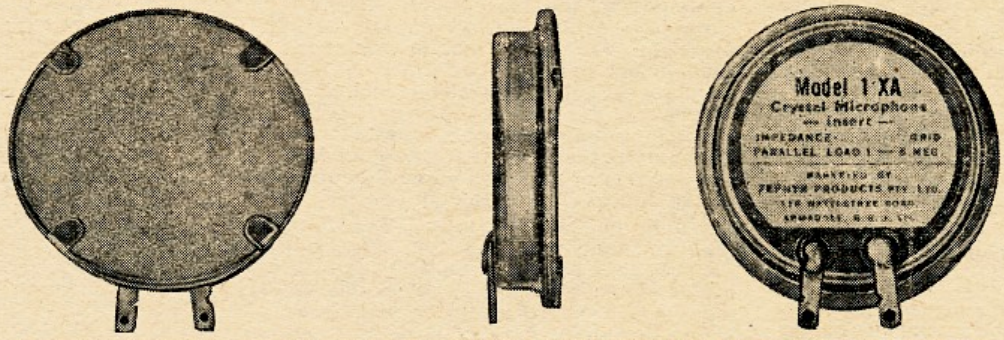
It was suggested in "A.R." that the polythene insulation material from coaxial cable will make effective feeder spreaders. It is better not to drill holes for binding wires, but to twist the wire tightly around the polythene near the ends. Also, after a few months' exposure to weather conditions, such feeder spreaders will show signs of "crazing," with probable breakage. This can be prevented by painting the spreaders with a sealer of clear plastic cement. —VK2NO.

FILLING PANEL HOLES

Holes up to half an inch diameter can be easily filled in by using the plastic metal compound known as "LOY." This material is something like the amalgam with which your dentist fills tooth cavities, and it sets hard in any metal panel in a short space of time. When set, it can be filed, drilled, emery-papered down and worked like any soft metal. —VK2NO.

MODEL "1XA" CRYSTAL MICROPHONE INSERT

AUSTRALIAN MADE — — FOR AUSTRALIAN CONDITIONS



FITTED WITH PLATED REAR SHIELD TO ELIMINATE HUM PICK-UP

- **Patented crystal unit guarantees outstanding efficiency and performance.**
- **Protected against ingress of moisture with approved moisture sealed crystal element.**
- **Small — compact — lightweight — durable.**
- **Will not blast from close speaking.**
- **Precision engineering ensures realistic reproduction and high output with long life and dependable operation.**
- **The only unit available with a genuine sintered metal filter.**
- **Good high frequency response ensures excellcellent speech reproduction.**
- **Aluminium diaphragm mechanically protected and frequency controlled by "Zephyrfil" filter.**
- **Australian made throughout.**
- **Only carefully selected cements used throughout, to suit Australian climatic conditions.**

TECHNICAL DETAILS

Rochelle salt crystal microphones are perhaps the most widely used for all types of service where quality speech and music reproduction at high output levels is a requirement. They are dependable in performance and when fitted with the appropriate "Zephyrfil" filter, their frequency response may be adjusted to suit any application or requirement.

This crystal microphone requires to be terminated with a high value parallel load of the order of 1 to 5 megohms for best results.

The mass of the moving parts is small, hence the sensitivity is high and a high efficiency is achieved.

Light gauge solder lugs are provided so that excessive heat in soldering will not be transmitted to the crystal element.

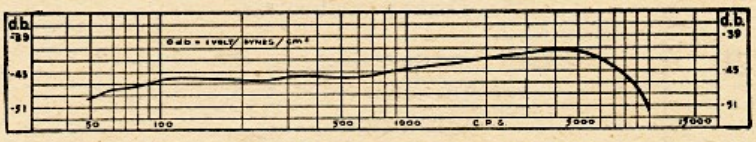
When mounted in a microphone cage, it is recommended that the insert be suspended in rubber, to eliminate shock and vibration.

One of the connecting lugs is directly connected to the case and care should be taken to solder the metal shield of the microphone cable to this solder lug, keeping the unscreened portion of the centre conductor as short as possible to eliminate hum pick-up.

All crystal elements are mounted on high grade suspension pillars, being fixed thereto with a good quality cement, thus ensuring stability and long life.

Case 1½" diameter (rear), ⅜" thickness, 1-13/16" overall diameter (front) with filter fitted.

Frequency Response = 60-6,500 c.p.s.
Output Level = —45 db (0 db = 1 volt/dyne/cm²)
Impedance = Model 1XA Grid 1 — 5 megohms.



Approximate Frequency Response Curve

AVAILABLE FROM ALL LEADING TRADE HOUSES

ZEPHYR PRODUCTS PTY. LTD.

58 HIGH STREET, GLEN IRIS, S.E.6, VIC.
Phone: BL 1300

TWO METRES, BUT HOW!

BY E. C. DAW,* VK5EF

AUGUST, 1955, issue of "A.R." contained an article by VK2QZ which he styled the **complete** explanation of 2 metres. Some of you may have considered that article humourous for the most part, but you can be assured it was all deadly serious and represented but a fraction of the weird and wonderful things that can happen to you when embarking on v.h.f., and 2 metres in particular.

The fact that some of the things he referred to could happen to someone besides me was very heartening, for at that time this QTH was undergoing the pangs of introduction, for the first time, in a serious way, to 2 metres by that rascal, Les VK5AX.

Oh yes, he lives here, too, and being radio's greatest urger, finally had me eating and sleeping v.h.f. Why? Because he had made a new converter and wanted to try it out on a strong local signal!! Now he **knocks** things up in very quick time, they always work first up, and seeing how simple it all looked thought there was nothing much to it, so had a go. Innocent me.

"QST" was quite a help, for by referring to many articles therein, it meant there was about 150 different ways of getting 100 watts input on 2 metres and then to add to the confusion, no two chaps on the air appeared to agree as to the best tubes or even antenna to do the trick. Finally, we settled for 12AT7 crystal oscillator, 12AT7 doubler, 2E26 driver, and p.p. 6146s final.

Finding the band came next; not having a Sherlock Holmes outfit, resolved itself into simple arithmetic, very simple, for having decided to get about half way in the active megacycle considered a rock 8.033 Mc. would do, so 18 times that gives 144.594—simple don't you think? Of course, that doesn't explain why the frequency finished up at 144.575, and that whilst getting the rig bug-proof a fairly hefty carrier appeared at 96.396 Mc. and about 30 others anywhere between 140 and 150 Mc.

Neutralising—how I hate that word—is just no trouble at all—according to "QST," "CQ," "A.R.," "R. & H.," "Pix" or "Sporting World"—for with a beam tetrode it's just a matter of feeding a voltage back to the plate from its grid, 180 degrees out of phase. Dead easy. Or if you don't like it that way, just resonate the screen circuit to some (always unnamed) frequency. We tried both, first of all the screen method which was lovely for it prompted the self oscillation of the final to be absolutely uncontrollable and provided anything up to 2 amps. in the antenna at any frequency you liked to nominate.

Next job was to try a-la-829B style, which worked better, much better, for then not only was the final neutralised, but completely neutral, the tube plates lost that rosy blue hue that they enjoyed to this point, the grid drive disappeared altogether, and all trace of r.f. was removed—a great success.

Some heavy thinking was now called for and whilst poking around the rig trying this and that, found it would remain fairly stable if one hand was held near the top left hand corner of the exciter chassis and one foot on the power supply, and one hand held close to the final plate line. Quite an exercise really, but considered too difficult to maintain whilst carrying on a QSO, so obviously something better had to be done.

At this point that character VK5AX came into the picture for he suggested the dummy antenna be abandoned and the yagi put on to thus let him hear what kind of a signal it would put out. This was done and a c.w. attempt made. Of course he was able to follow me (at reduced speed) on any of the 30 odd frequencies mentioned before.

Not to be discouraged by that, he said "apply some modulation." That was the start of a new set of problems, mainly resolved after feed-back was cured; but then I'm a long way ahead of the story.

"At this stage 2 metres was nearly abandoned . . ."

When the modulator was connected, the first effect was the beautiful purple glow the 807s took up and every time I puffed, whispered, shouted, whistled, or just plain talked into the little pink ear of the mike everything in the shack spoke back at me with either sparks, or extra tonal shades from a deep bark to a high pitched scream or any number of combinations of them.

To cure that, about a bucket and a half of by-pass condensers and r.f. chokes were used, every lead that had the temerity to have an exposed end in a handy position had a few pooffs put across it and earthed, the mike lead was butchered until it was no longer a quarter wave of any of the suspected as well as the main frequency, all screw drivers with long shanks were removed from sight or earthed, and even the tube chair had its frame under suspect at one stage.

Then we were ready for the big test, and high-presto!! 100 watts input, 100 per cent. (ahem!) modulation, mostly upwards we think, a bucket full of burned-out pea lamps that could not take it, and a signal report of readability 5, strength 1 a mile way, the excitement is great!

More tuning, more grid dip oscillator dipping, more shielding, and oh yes, more neutralising—then bingo, our 35 watt lamp used as a dummy antenna went up in smoke and joined the pea lamp heap. Were we in business yet? No, it was back as a perfect self oscillator, but this time only about 27 different frequencies—a slight improvement.

At this stage 2 metres was nearly abandoned for the peaceful pursuit of big game hunting or the like, but it was not to be, so once again out came the soldering iron and some more tidying up was done, a few leads were shortened here and there, and just for luck took the crystal out of its socket from inside the case and mounted it outside on the back plate where it could be easily removed and replaced by a drive from an n.b.f.m. exciter. You see we were getting very scientific at this stage and thought the good book may have something when it stated grid drive was not an essential for f.m.

The rig was again fixed up, and as usual had 43 different frequencies, so went out to get the axe with the idea of hammering some sense into it, left the thing turned on whilst out of the shack and when returning a few moments later, found all well with **one** frequency only, 100 watts input, very nice upwards modulation, and monitoring well, also indicating pretty fair r.f. output.

Why? Couldn't even guess at this point, but found that every time it was given enough warm-up time, it went like a bird. So at least we could go on the air again, and on cross-town checks and later to VK5MT, all was reported well.

Now says Les, let's try duplex. We then had a further set of problems. The antenna in use is but a temporary affair (borrowed), four element yagi about 10 feet off the ground and fed with 300 ohm ribbon. This latter caused quite a lot of strife in that the amount of r.f. in the shack was too heavy and blanketed the receiver, so a change to co-ax was made, ending in a balun at the driven element — much improvement noted.

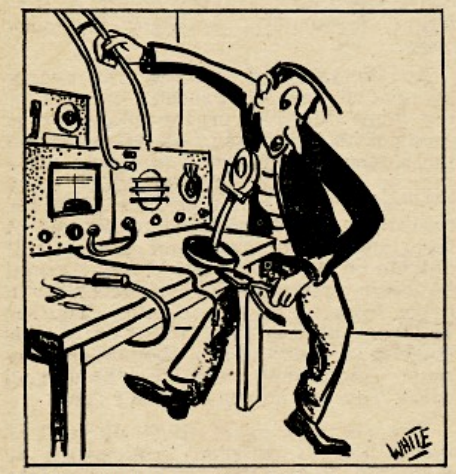
Oh yes, duplex, now after a couple of weeks of trial and much error, we finally made it, VK5AX having no trouble at his end on 144.42 Mc. He could hear me quite well with his rig on, but me? Yes, as usual, r.f. feed-back made more research necessary for his signal with my transmitter off was 9 plus, but when the transmitter was on,

* East Terrace, Gawler, S.A.

he sounded like Donald Duck (or s.s.s.b.) and a rockbreaker fighting it out.

After a lot of tries, it was found that if I earthed one side of the feedline, held the other in my hand and laid a pair of pliers on the lead to the converter about 0.4987357 wavelength from the input terminals, he came out of the mud quite well. I told him so, and then moved across the shack to get some cigarettes and at the first movement from the operating table back came all the trouble, so had to sit still in one position as a screen or something.

At this point the XYL comes into it, for seeing the worried look on the countenance, the effect of sleeplessness and reduced appetite, she really took pity and displayed an interest in this thing that could so influence an otherwise seemingly normal bloke. The rig was on, squeaking and squawking away and she put her finger against the crystal and said, "What's this little black thing?"



"If I earthed one side of the feedline, held the other . . . and laid a pair of pliers . . ."

The bottom of the earth fell out, no not quite, spurious oscillations stopped, the receiver went quiet, Les' voice jumped at us and we had to dive to the volume control to quieten him down and as soon as her finger came away from the crystal, hell broke loose again. Tried my finger, it worked too, so rushed a shield around it (the crystal, not the finger), and presto, all is well. No spurious, no warming up periods needed, one carrier, stable signal, upwards modulation, 100 watts input, 6 mills grid drive, and all we want now is someone to answer when we call "CQ 2."

If you have read this far, you will have learned that instead of the rig being balanced on one corner and supported by torches, multimeters, etc., etc., it is now screwed in the rack, and anything within cooee of it is of a length breadth or depth less or greater than quarter wave on 2 metres. There is more 0.001 uF. by-pass condensers in the whole outfit than Mr. Ducon ever thought he would sell one customer, and there is an air of peace and quietness about the place that usually follows the conclusion of a **successful** experiment.

Did I say peace and quiet? For a while anyway, for now we start on 5 metres and knowing my form, it will all happen again. Might even tell you about it some day.

AMATEUR CALL SIGNS

FOR MONTH OF MARCH, 1956

NEW CALL SIGNS

VK— **New South Wales**

2ACO—C. H. Orr, 381 Princes Highway, Rockdale.
2AOZ—L. H. Ferris, 11 Floss St., Hurlstone Park.
2ZAE—A. K. Greenhalgh, 10 Sketchley Pde., New Lambton.
2ZAI—K. L. King, "Fontainbleau," Honour Ave., Lawson.

Victoria

3ABT—J. R. Barber, Carr's Lane, Anakie.
3AHX—C. W. R. Holman, 110 Normanby Rd., East Kew.
3AWT—C. J. Waterlander, William St., Ouyen.
3ZDB—S. R. Brooks, 23 Hex St., Tottenham.
3ZDC—D. Calwell, 87 Panoramic Rd., North Balwyn.

Queensland

4HO—M. S. Robinson, "Roserea," 678 Logan Road, Greenslopes.
4HX—H. C. Harman, R.A.A.F. Station, Archerfield.
4KC—W. Bock, C/o. Bank of N.S.W., Mareeba.
4NV—L. L. Neaverson, 17 Lamrock St., Holland Park.

South Australia

5ZAI—A. D. Nutt, 27 Liberty Gr., Woodville Gardens.

Territories

1RW—R. C. Widows, H.M.W.T. Station, Direction Island, Cocos Keeling Islands, Indian Ocean.

HAVE YOU RETURNED YOUR QUESTIONNAIRE YET?

CHANGES OF ADDRESS

VK— **New South Wales**

2CV—R. J. Ferrie, "Owls Castle," Epping Rd., North Ryde.
2EN—E. C. Hulme, 34 Gnarbo Ave., Carrs Park.
2JA—J. A. J. Mitchell, 376 Centenary St., Albury.
2JI—I. F. Marshall, 40 Wycombe Rd., Neutral Bay.
2QV—P. H. Sara, 23 Rose St., Punchbowl.
2UX—F. M. Goyen, 2 Gilderthorp Ave., Randwick.
2YJ—C. W. Johnson, Station: 53 King St., Newcastle; Postal: P.O. Box 625, Newcastle.
2ADV—C. Hicks, Rayner Road, Whale Beach.
2ALG—J. A. Ackerman, "Idlewild," 77 Bourke Street, North Parramatta.
2AVO—J. T. Crichton, 12 Rosedale Square, Lismore.

Victoria

3BH—C. R. Whitelaw, 2 Elsie St., Boronia.
3CU—C. J. Jackson, 33 Macrina St., E. Oakleigh.
3JH—L. J. Rickards, Lot 3, Maria Ave., Nunawading.
3SD—R. V. Wilson, 8 Dixon Gr., Blackburn.
3XA—D. V. Hope, 4 Elm St., Blackburn.
3ZB—T. G. Roper, 533 Waverley Rd., East Malvern.
3ACJ—V. P. O'Brien, C/o. Power and Bennett, Solicitors, Pysent St., Horsham.
3AVH—J. F. Hirst, Lot 51, Volga St., Pascoe Vale.

Queensland

4DO—H. L. Hobler, Flat 3, "Riverview," 134 Victoria Pde., Rockhampton.
4EM—E. B. Mars, Commonwealth Bank, Charleville.
4FB—F. S. Beech, 209 Bennetts Rd., Norman Park.
4GP—D. A. Crowley, 145 Nudgee Rd., Doomben.
4RZ—J. M. Atkinson, Railway St., Gatton.
4WD—W. G. Dodd, 4 Bruan St., Deagon, N.7.
4WJ—J. H. Farrell, Station: C/o. Power House, Quilpie; Postal: P.O. Box 60, Quilpie.
4YA—W. A. Young, 19 Cribb St., Ipswich.

South Australia

5IQ—R. F. Treharne, 19 Stafford St., Clearview.
5LD—L. Deane, 21 Davenport Ter., Hazelwood Park.
5TW—T. Welling, 11 Jardine St., Mt. Gambier.

Western Australia

6BR—B. R. Field, 19 Charles St., Sth. Perth.
6EE—R. R. Elkin, 63 Woolwich St., Leederville.
6EW—E. J. Wilson, 162 Ninth Ave., Inglewood.

Tasmania

7BR—H. J. Bracken, Bronte Park.
7FJ—F. J. Evans, 27 Milton Cres., W. Moonah.

Territories

9TC—T. M. Cole, R.T.C., Kavieng, New Ireland.

CANCELLED CALL SIGNS

VK— **New South Wales**

2GH—H. C. Harman. Now VK4HX.
2HT—M. S. Robinson. Now VK4HO.
2VX—V. E. Stanley.
2AOY—A. Kitchen.
2ZBN—A. D. Nutt. Now VK5ZAI.

Victoria

3ZCO—C. J. Waterlander. Now VK3AWT.

South Australia

5BS—B. S. Clarke.

Western Australia

6HM—C. W. R. Holman. Now VK3AHX.

Territories

9KC—W. Bock. Now VK4KC.
1ZM—B. E. Shaw.

ERRATUM

Mr. K. J. Love's call sign appeared in the January issue of "A.R." as VK3AWV. This should have been VK3AWU.

During 1956, "Radiotronics" will feature exclusive articles on transistors, ultra-linear equipment, T.V., F.M., Audio, Hi-Fi., and the latest information on all new valves.

Men in both the amateur and professional fields find that "Radiotronics" keeps them abreast of the latest development in the Electronic World.

Subscription: 10/- ***Please do not send stamps.***

AMALGAMATED WIRELESS VALVE COMPANY PTY. LIMITED

47 YORK STREET SYDNEY N.S.W.

VC1a-56

1955 "CQ" WORLD-WIDE DX CONTEST RESULTS

Per favour of W1WY and VK3ATN we are able to publish the following results of the 1955 "CQ" World Wide DX Contest pertaining to Oceania.

W1WY said: "The returns from VK and ZL were disappointing. Hope the boys 'Down Under' will do better in our next Contest, come October. We will have the rules and dates out much earlier this year.

"All the following results appeared in the May issue of 'CQ' together with all other scores."

Number groups after the call signs denote the following: Final score, number of QSOs, number of Zones, and number of Countries. Call signs in bold type are the winners.

PHONE—Single Operator

Australia

All Band—					
VK2GW	12,352	81	29	35
VK3ATN	115,475	286	57	92
VK3BW	1,400	25	11	11
VK5LC	13,847	81	25	36
VK5WO	4,464	44	16	20
VK6RU	8,322	62	25	32
21 Mc.—					
VK4EL	4,920	50	15	25

Hawaii

All Band—				
KH6IJ	250,800	614	62	70
KH6PM	101,654	339	61	55
KH6SP	30,888	218	26	26

New Caledonia

14 Mc.—				
FK8AO	741	23	8	11

New Zealand

All Band—				
ZL1BY	91,264	261	52	72
ZL1WQ	49,932	167	48	66

Ryukyu Island

All Band—				
KR6QI	1,456	20	14	14
21 Mc.—				
KR6CR	2,436	33	14	14

C.W.—Single Operator

Australia

All Band—				
VK2GW	152,456	447	45	73
VK2EO	77,004	290	32	61
VK2PV	42,394	167	37	57
VK2ADE	17,780	91	25	45
VK3CX	7,224	64	18	24
VK4CG	4,466	53	14	15
VK6RU	66,992	237	40	66

Carolines Is., Western

21 Mc.—				
KC6CG	59,730	326	24	42

Hawaii

All Band—				
KH6IJ	395,784	961	64	74
KH6PM	186,960	522	59	64
KH6SP	110,522	537	39	34
KH6MG	18,305	177	18	17

Marianas Is.

All Band—				
KG6AGC	21,508	115	38	38

New Caledonia

All Band—				
FK8AH	22,889	184	22	25
FK8AO	8,640	84	22	18

New Zealand

All Band—				
ZL1BY	194,680	434	62	93
ZL1MQ	107,262	376	47	54
ZL2GS	82,610	263	46	64
ZL1MT	9,240	75	29	27
14 Mc.—				
ZL4CK	16,203	167	14	19
7 Mc.—				
ZL3LL	7,511	93	12	17

Philippines

All Band—				
DU7SV	126,452	428	47	54

DX ACTIVITY BY VK3AHH†

PROPAGATION REPORT

3.5 Mc.: Only openings to **North America** were observed during the month. Times were between 0900z and 1200z.

7 Mc.: Due to commercial interference, this band now appears to be absolutely useless for Amateur DX operation. The only breakthroughs reported were to **North America** and the **Pacific Islands** between 0800z and 1400z.

14 Mc.: Activity and conditions are such that it is difficult to mention any definite times of openings. Fair to good signals have been reported and observed from all continents. Conditions seem to follow the usual pattern: **Europe** around 2000-2300z, **South America** 0500-1400z and 2000-2200z, and **Africa** 0800-1400z.

21 Mc.: This band showed interesting openings to **Europe** over both long and short paths (0600-0800z, 0900-1400z and 2100-2300z). Other times seemed to be as usual.

27/28 Mc.: Good openings have been reported to **North America, Africa** (0500-0930z) and **South America** (2200-0200z).

NEWS AND NOTES

Christmas Island is represented by **VE7ASO/VR3**, who is active on 28 Mc. phone (from 3HE, 4HR).

CR10AA has been heard and worked on 14 Mc. (from 3CX, 3JA).

KC6AL represents the Eastern Carolines!! (thanks 5WO for correction).

ZD8SC, Ascension Is., and **FE8AE,** Fr. Cameroons, are supposed to be active on 21 Mc. c.w. (from 5WO).

Thanks to **VK3AXU** for latest information on B.B.C. transmitting frequencies.

QTHs OF INTEREST

(from 3JA, 4SE, 5WO, 7LZ, BERS195, Rod de Balfour, and Norman Clarke)

CX1OR—Hugo Daniel Velazquez, Paso de los Toros, Tacuarembo, Uruguay.
KG1AR—Clay Blakeslee, 1983 D. A.A.C.S. Sqdn., A.P.O. 23, P.M., New York City, U.S.A.
HB9IX—Dominik Reichmuth, Sedeilles/Vaud, Switzerland.
VU2RT—Paddy Padmanabha, Box 2487, Calcutta, India.
YN1HF—Howard Fowler, U.S. Embassy, Managua, Nicaragua.
F9RY/FC—Box 130, Bastia, Corsica.
KP4ABD—Box 2566, Rio Piedras, Puerto Rico.
KC6AL—Don Lynch, C/o. Weather Bureau, Ponape, Eastern Carolines.
VQ5EK—W. K. Campling, Box 1803, Kampala, Uganda.
ZS7C—C/o. P.O. Goedegun, Swaziland.
CR6CV—Americo Silva, Box 3078, Luanda, Angola.
VP5DC—Via W4NMO.
VP5DX—Harry Forkes, 2 Wexford Rd., Kingston, Jamaica.
MP4KAC—C/o. Kuwait Oil Co., Kuwait, Persian Gulf.
VQ2DT—Box 77, Livingstone.
FB8BZ—Box 1171, Tananarive.

ACTIVITIES

3.5 Mc.: Ws are common DX on this band, and that is all **3AHH**'s log shows this month!

7 Mc.: Apart from Ws, Laurie **2AMB** reported DU7SV.

14 Mc. C.w.: Frank **2QL:** EA9DF*, VR1B* and ZP9AY, FX7GB. **2AMB:** YJ1AA*, VR1B*, ZD6BX*, LU6AX*, LU8MAH*, FO8AB*, VP-9BM*, ZC4IP*, EA9DF*, 4X4BR*, VQ6LQ*, VQ5GC*, YV4AU*, ZS4GD* and YJ1RF, XE-1MB, CO2OM, CO2BM, CO8RM, LU8BAJ, LU-1DW, KC4USV, 4X4FW, ZS6AIZ, ZE6PU, CE-3RE, VQ3FN, FB8BX, ZD6BE, JZ0PS. Neville **2APL:** KV4*, VR1B*, LU9GC*. Alan **3CX:** FB8ZZ*, VP7*, KP4*, ZE2PJ*, KG6IG*, KG-1BO*, F9QV/FC*, ZP9AY*, EA9DF*, KV4*, VP9*, VP6LN*, TI2WR*, VQ5GC*, ZS4*, VP4KL*, KC4USV*, VQ6U*, VR1B*, GD3HQR*, VK1GA*, FM7WP*, P6PJ*, CR10AA* and ZS7D, HI8FR, AC3SQ. Jack **3JA:** VP2DA*, YJ-1AA* and CR10AA. Ken **3KR:** FM7WP*. Stan **3TE:** KT1JS*, LU3BS*, LU9DL*, PY2QH*, VR1B*, ZB2I*, 4X4FR*. Ivor **3XB:** OY7ML*, FB8ZZ*. Hans **4HR:** EA9DF*, OX3KW*, ZS*, OQ5*. Syd **4SE:** LU8BAJ*, LU5HAQ*, VE1AE* and CX2BZ, ZK1BL, VP7NS, VQ5GC, SV1SMX, YJ1AA, CO3YP, HZ2CY, EA8BM, ZS6QW. Doug **5BY:** ZD4CC*. Joe **5JO:** HP1EH*, ZS-6OB*, ZS6SO*, ZS6VV*, ZS4TR*, HP3FL*, TI2RMA*. Ray **5RK:** VE1AE*. Austin **5WO:** VR1B*, Col **7LZ:** VR1B*, XE2HU*, LU6SC*, VK1GA*, HC1KD*. Eric **BERS195:** FB8ZZ, FB8BR, KC6AL, JZ0PS, LU7XP, MP4QAL, KG1AR, ST2NG, SV0WL, VE8WN, VK1GA, VK1FA, VP9BM, VQ5GC, VQ8CB, VQ6LQ, VR1B, XE1MB, XE2LA, YI2DX, YJ1AA, ZC-4BX, ZE6JU, 4S7MR, 4X4FW, 4X4IB, LU0DJW/MM. **Dave Jenkins:** VR1B, KP4ZW, EA8BF, CE3DZ, LU7XP, XZ2OM, YJ1AA, 4S7PT.

14 Mc. Phone: 2AMB: CO1AF*, VP1JA*, CN-8MN*, OZ5KQ* and TI2HP, TI2OA, ZS6WS, ZS6QW, HC2BH, HC1FG, ZK1BL, VP2KM, FM7WQ, YV5AE. YV5AG, YV5GU, FB8ZZ, ZD6BX, KC6AL, XE2KW, HK5ER, FU8AC. Neil **3HG:** YV5BS*, FB8*. **3KR:** KP4*, CO2MO*, GW4CC*. John **3AGD:** OA4DR*, HH1HB*, CO3RC*, VP1VR*, HP3FL*, KP4ZC*, XE3AX*, VP2DA*, OZ9HS* and HB1. Dave **3ZAT:** GW-3FVI, YV. **4HR:** HB1OP/HE*. **5WO:** HP3FL*, VQ8CB*, FB8ZZ*, VR1B*, ZS7C*, VP2DA*, PY2CK*, YV5EC*, EA7EM*, HB1OP/HE*. **7LZ:** YV1BI*, HC2BH*. **Dave Jenkin:** YV1BE, CO-3RC. **Rod de Balfour:** VR1B, CT3AN, KP4FI, CO2BL, YS1MS. **Norman Clarke:** GW4CC, VR1B, CN8MM, ZM6AT, EA7CP.

14 Mc. S.s.b.: Jack **3WR** reports that **3AEE** has now contacted s.s.b. stations in 37 countries. Approx. 50 countries are supposed to be represented on s.s.b. Additions to the list of **VK**-s.s.b. stations published last month are: VKs 2BP and 2IJ.

21 Mc.: 2QL: OQ5QS* and ZS1KD, VQ2GW, CN8AF, XZ2OM. **2APL:** CO2CY*, CO2AY*, DL*, G*, KZ5JB*. **3HG:** OH*, OA4AU*, DU*, BV1US*, CN8MM*, VP5BE*, FB8BZ*, LU3PF*, KP4ADX*, XE1RE*, ON*, ZE2JK*, and CR5SP. **3JA:** VP6GN*, VP6AM*, CE2AY*, VP4LF*, OD5AV*, FB8BZ*, VP5EK*, ZS9G*, MP4KAC*, VQ2DT*, VQ2GW*, VP5DC*, VP5DX*, XE1RE*, CO1AH*, EA9AZ*, CR7CN*. Percy **3PA:** PJ-2AN*, VP1EE*, YN1PM*, HP3FL*, KV4*, HC-1FS*, HC4MK*, LU3AX*, LU3PF*, LU6QB*, VQ4EO*, VQ2GW*, VQ2DT*, OQ5AG*, ZS9G*, ZS3G*, ET2PA*, a long series of ZSs*, EA9AZ*, EA*, EI*, GW*, GC3EML*, GD3GMH*, CT1*, OD5AV*, MP4KAC*, XZ2OM*, VS*, VS1*, BV-1US*, FU8AC*, ZM6AR*, G*, SM*, F*, DL*, HB*, OE*, I*, ON*, PA*, OH*. **4HR:** EL4A*. **5BY:** FA8*. **5WO:** F*, HB1LG*, G*, ZS*, FF-8AP*, GC3EBK*, VP6FR*, KP4ADX*, HC1FS*, MP4KAC*. **7LZ:** ZS*, G*, EI*, VP6WR*, KP-4ADX*, LU3PF*, VS6*, ON*, BV1US*, VR1B*, DL*, ZD6BX*. **Dave Jenkin:** HC1FS, G, HB, LA, LU2EB, DL, ZS, SV0WO, VP6GN, VU, VQ2GW. **Rod de Balfour:** ZM6AR, LU3PF, HC1FS, G, F, OH, I, DL.

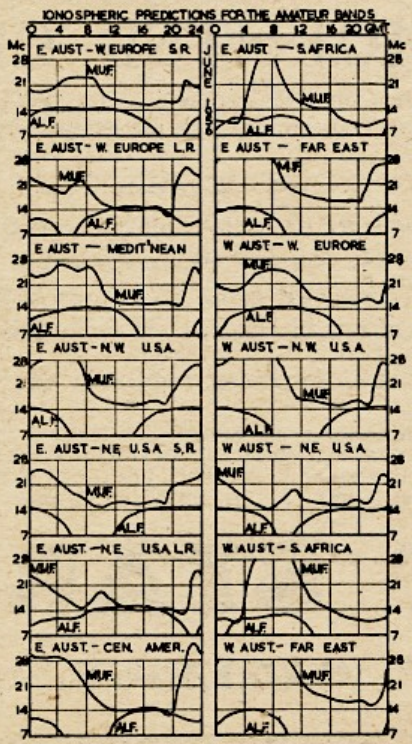
27/28 Mc.: 3HG: Ws*, ZS*, CR7AF*. **4HR:** VQ2GW*. **5WO:** W*, KP4PQ*, PJ2AA*, CR7AF*, CR7BB*, VQ2AW*, ZS1MR*, ZS5MP*, ZS2AX*, ZS6ANN*, ZS6LF*, ZS2KF*, ZS6LR*. **7LZ:** ZD6RD*, YN1HF*, VE7ASL/VR3*, HK4AM*, ZS5LR*, ZS5MP*, LU3AAT*, LU3BQ*, LU5AE*, KR6QI*. **Rod de Balfour:** JA9BE, VE7ASL/VR3, XE2PY.

Rare QSLs were received by: 2AMB: XE2NT, CO2BL, HP1EH, OA4AW, YV5FV, 4S7MR, FB-8BR. **3JA:** CP5EK, ET3LF. **4SE:** OA4J, LU-1DCQ, CR6CV. **5WO:** FB8ZZ, VQ5EK, ZK1BL, FO8AN, KC6AL. **BERS195:** VE8BC, VU2RT, ZS5CV, HB9IX/MM, SM8AIS. **Rod de Balfour:** JA3BB, EA2CK, OE5JK. **Norman Clarke:** PY-1NC, EA2CQ, CX1OR.

Thanks to VKs 2QL, 2AMB, 2APL, 3CX, 3HE, 3HG, 3JA, 3KR, 3PA, 3TE, 3WR, 3XB, 3AGD, 3AXU, 3ZAT, 4HR, 4SE, 5BY, 5JO, 5RK, 5WO, 7LZ, and BERS195 (VK3), Dave Jenkin (VK3), Rod de Balfour (VK7), and Norman Clarke (VK2).

† Hans J. Albrecht, 10 Belgravia Ave., Box Hill North, E.12, Vic.
* Call signs and prefixes worked.
z — zero time—G.M.T.

IONOSPHERIC PREDICTIONS FOR AMATEUR BANDS, JUNE, 1956



SHORT WAVE LISTENERS' SECTION*

Short wave listeners pay heed! The bands are becoming better, and now winter is upon us, it's much nicer to sit inside in the warmth with your rx. You might say there's nothing to listen to, but just after turning on my rx recently I heard five stations, namely VP2, VQ5, KV4, I1 and HB9, in almost as many minutes. So get those rx's going and see just what you can do.

HAPPENINGS OF THE MONTH

Well boys (and girls, if any), I'm happy. I'm almost jubilant. In response to my previous appeals I have received correspondence from VK4, VK5 and from my other two readers—local VK3s. Nothing yet though from VK2, 6, 7 or 9. What happens in these other States? Don't they have any rx's? If you do, what about writing and letting us know all about it?

Here in VK3 we have been having a very interesting time. At the April meeting of our Group, Hans 3AHH (ex-DL3EC) presented us with a talk on "Amateur Radio Overseas." This was a very interesting talk with Hans covering a very wide scope of radio activities all of great interest to us here. We thank you very much for coming along and assisting us in this way, Hans.

On Sunday, 29th April, the Group visited the police headquarters radio station, VKC, better known as D24. Seventeen persons participated in this visit, including several Amateurs who we were very pleased to have with us. Senior Parkinson, who conducted the tour, first showed us the control room which included two very interesting console units, the headquarters switchboard, and many large maps and diagrams. The flashing lights on these equipment were very spectacular. The operator on duty obligingly called up the station at Sale to give us a demonstration of the workings of their country network. Several calls were made to and heard from the mobile units working in the suburbs. The view from the roof was next seen, then the transmitter room. A look over the police garage and the old Melbourne gaol concluded our visit, which everyone agreed was very worthwhile. Our thanks go to Sgt. Meehan, Senior Parkinson and members of the Police Wireless Branch for their efforts in this regard.

As previously mentioned in these notes the VK4 Division has now decided to cease hiding its light under a bushel. E. Bryant, whose first name I'm not sure of, has forwarded some quite interesting information. A Group has been formed in Queensland but their membership is not very great. So rally round you VK4 boys and support this Group. Write to E. R. J. Bryant, 50 Marmion Parade, Taringa, S.W.6, Brisbane. Our correspondent tells us that he is using an AR7 and two home-built rx's with dipole antennae cut for 14 Mc. His antennae were attached to a mast 80 ft. high, but in doing some maintenance work, he had trouble with the rope halyards and now his antennae go only to a 56 ft. pole. The antennae are fed with 75 ohm twin flex through an antenna tuner. A 150 ft. doublet is used on bands other than 14 Mc. Most of the chaps in the VK4 Group are evidently using household d.w. sets with a length of wire attached to the nearest tree. Most of them are still going to school and therefore cannot afford to buy other gear. We hope to hear more of the VK4 Group in the near future. Don't forget to write and let us know all about your activities.

Len Cragen, writing on behalf of the VK5 Group, tells us that Mac Hilliard returned safely home. Their meeting for the month of March was held at the Central Mission room, a total of ten members attending. Final arrangements for a VK-ZL Contest were made at this meeting. Unfortunately information regarding this contest, which was to be held during the month of April, was not received in time for publication in "Amateur Radio." Still, we hope to hear the results of this contest very soon. Len also forwarded reports on stations heard by s.w.l's. in VK5. Thanks for your letter Len and keep sending information along to us.

Alan Holmes, from Wangaratta, representing the country VK3s, writes that he is using a centre fed antenna, 33 ft. long and 35 ft. high. His rx is an American RCA AR88D, 14 tube job, with a one-tube preselector ahead of it. Alan says it works out really fine. He previously used an Eddystone "640" and an AR8. Hope to hear some more from you too Alan.

A card has been received from an s.w.l. in the United States, namely, H. F. Southwick, 316 Bank Street, Fall River, Mass., U.S.A. He is using a National SW54 rx and heard the following VK stations on 40 mx c.w. during March, between 5 and 8 a.m. E.S.T. there: 4FB, 2MF, 2EX(?), 5MZ, 3AHK, 3OH, 4JF, 3FC, 3APH, 3ATO(?), 2EY, 7RY, 3XB and 4BM. He states that other VKs were heard but were too weak to copy, also that there has been lots of QRN during the month.

Jack Keenan, who holds the listener's number ISWL5955, has written stating that he's been in Australia for five years and didn't know until recently that we had an S.w.l. Group. Come along to our meetings Jack, we'd be very pleased to see you. Our Group meets at the W.I.A. Rooms, 191 Queen St., Melbourne, at 8 p.m. on the last Tuesday of each month. Any other interested persons are cordially invited to come along.

COMING EVENTS

Details of our programme arranged for the next five months are given on page 17 of "A.R." for May, 1956. We are also making arrangements for a visit to the City West Telephone Exchange and to one of the city newspaper offices. Come along to our meetings and find out all about our activities. Also, if you have any suggestions for us, be you an Amateur or S.w.l., don't fail to let us know.

AMATEUR BAND HAPPENINGS

Owing to lack of space, no calls heard appear this month. In future, in the interests of brevity (good word that) I have decided to use prefixes of stations only. A very good list of call signs can always be found in the DX Activity column written by Hans 3AHH. Some of you may read his page by chance now and again. Anyway, I would like your comments on this idea of prefixes only, but if you don't like it, I'll soon change back to the other method.

Well chaps, I'm afraid my space is running out and the editor will be after me. Hope to hear from lots and lots of you soon, cheers for now and all the best to you in your listening.

* Compiled by: Ian J. Hunt, WIA-L3007, 101 Robert Street, Northcote, Vic.

FIFTY-SIX MEGACYCLES AND ABOVE

NEW SOUTH WALES

The big event for the month was the field day held on Saturday and Sunday, 14th and 15th April, in conjunction with the Bushwalkers' Association. It was a Search and Rescue exercise and was held in the Kurrajong-Bilpin area. Eighteen members of the Group and thirteen Bushwalkers took part in the two-day event. Most of the "bods" rendezvoused at Parramatta railway station at 8 a.m. on the Saturday morning and then proceeded to the base location at the top of Kurrajong Heights by car. At approx. 2 p.m., after the briefing and lunch had been disposed of, four search parties, consisting of one v.h.f. member with a walkie-talkie and several bushwalkers, dived into the bush at various points and proceeded to carry out the search. At the same time several mobile stations scattered around to different points of the landscape to act as links between the walking parties and the base station.

As the daylight faded out the parties made camp for the night, some not quite so soon as others—the terrain was not overabundant with flat camping areas. After all, it was the Blue Mountains area! Perhaps this explains why all the parties were up, breakfasted and ready to proceed by 7.30 a.m. on Sunday morning! The weather on the Saturday had been dry, but cool and blowy. During the night there was some rain, but Sunday morning saw a worsening of the weather situation. Cold rain and cloud spread over the whole area.

From the top of Kurrajong (you're right, that's where your scribe was) it was quite an impressive although hardly cheerful sight to the westward as the clouds closed in, blotting out ridge after ridge. By mid-morning the weather was so bad that it was decided to recall all parties. This was where the radio communication really proved its worth. The walking parties were directed to proceed along specified routes to hit the roads at known points and the mobile cars, plus several cars from base, were directed to these spots and everybody was returned to base in a very short time. Luckily for us, the weather cleared after lunch, which made the return to Sydney a much more pleasurable affair.

Despite the weather the event was judged to be a successful one. The bushwalkers were very pleased with the way that radio communication expedited their control of the search and the v.h.f. members were very pleased with the success of the communications. One of the outstanding things in the communications set-up was the fine signals emanating from the crystal-controlled walkie-talkies. At no time was any link out of action due to inability to make contact and during practically the whole exercise base station was in direct communication with the walking parties. We think that in future exercises of this nature the mobile cars as relay stations will prove unnecessary.

Talking of future operations, we heard 2APQ saying that next time he would lend someone else his walkie-talkie; he took a dim view of taking his morning shower under a waterfall. Your scribe took a dim view of the bush roads; he took a couple of hours to wash them off the car when he got home.

The following members were buzzing around the area during all or some of the week-end: 2HL, 2VL, 2APQ, 2ZAR, 2ANF, 2OA, 2ZAV, 2AJZ, 2AJA, 2ATO, 2AZO, 2HO, 2ZAU, 2AAB, 2CE, Es Griffiths, Darrell Price and Wal Jacobs.

On Wednesday, 2nd May, we held a much less strenuous event—a night hidden tx hunt. Roy 2HO, accompanied by Rix 2AET, set up in the bush at the back of Killara. Five cars faced the starting line at Ryde—2AWZ (on his own), 2HL with 2NP as his navigator (?), 2AZO/2ATO, 2AFM with three sources of good advice, and 2OA with 2APQ swinging the beam. Promptly at 8 p.m. Roy's signal came on the air and we were off. We cannot tell you all the details of what went on during the trip to the location, but we can tell you how the hounds arrived. Yes, we were first in again. "Four-in-a-row Winchy" they call us now! But we are not saying a word about all the wrong cars we investigated in the bush along the Arterial Highway! We still blush at some of the things we found. However, we eventually found the tx after breaking two springs, four shock absorbers and two necks. At least they weren't broken when we examined them, but we still don't know why not.

At 9.30 p.m., when the transmission was supposed to cease, nobody else had arrived, so the tx was allowed to carry on. A few minutes later 2AFM (the other half of the Parramatta team) turned up, closely followed by 2AWZ and 2ATO. However, no sign of 2HL/2ANP, so we started on the hot dogs and tea. At ten o'clock still no Horrie, so the tx was turned off and the rx turned up. There was Horrie, flying blind. However, we managed to talk him down and he arrived before all the snorkers had disappeared.

On 30th April, 2ADT challenged 2RU by working 15 JAs on 50 Mc. and brought the score level by working another one the next day. Isn't 50 going to close this year? Doug 2ASA is safely back from his trip down south. We leave the VK3 scribe to report on his doings down there, but we can asure them that Doug is not worn out. He has since put up a 5/5 and is now checking it against his 12 el. beam. We look forward to some 144 Mc. activity in the Griffith area before too much water has flowed under the bridges. Adrian 2HE is going down there shortly to take some gear and show them how to get going on "two." Two more new stations have popped up on 144: 2ZBB and 2ER. Now that Eric 2AFM has got his gear going we only need a few more and 144 Mc. will be sounding like 14 Mc.!

The April meeting of the Group was held at the Petersham Technical College on Friday, 6th, with an attendance of 38. 2ANF, 2APQ, 2VL and 2AUI gave us the low-down on walkie-talkies. The May meeting was held on 4th May at the same place. This was our annual meeting at which we elected our officers for 1956-57. In a most democratic manner the following officers were elected (unopposed): Chairman, Perce 2APQ; Vice-Chairman, John 2ZAV; Sec., Bob 2OA (you see what I mean about "a most democratic manner"); Committee: Harry 2HL, Eric 2AFM, John 2ATO. After the elections, the Chairman read his annual report. Roy made it plain that the v.h.f. boys play a significant part in the Institute's activities.

During the evening we were given a lecture on "V.h.f. Propagation" by Prof. Yardley Beers, W2AWH. Yardley gave us an insight into the various ways our signals get out to distant places. During his lecture he gave it as his opinion that the Sydney-Auckland path was ideal for transmission by ducting. After this, we are looking to Norm 2ALJ entering the DX lists. Inferentially, Yardley also gave us a good case for a power increase to one kilowatt—at least on the v.h.f. bands—to do some studying of "scatter" effect. At the end of his lecture, Yardley gave us a few sidelights on v.h.f. operation in New York from which we gathered that the average W is using much the same gear as we do.—2OA.

HAVE YOU RETURNED YOUR QUESTIONNAIRE YET?

VICTORIA

Although the weather wasn't the best at the last fox hunt, it certainly didn't deter the hounds even though it gave them an added difficulty in tracking down the fox as the frequent showers played tricks with the receiving aerials, nevertheless all hounds made several catches. During this hunt, the fox 3LN found a very excellent hiding place in which he managed to remain for quite a while without being discovered. In fact it was such an unusual hiding place that he intends using it again on another hunt and feels so sure that he will never be discovered in it that he has offered three points to any hound who catches him there instead of the usual one point. After a tour round the suburbs in which the hounds found themselves in some very queer places, the hunt eventually finished up at the home of Ray 3KD in Essendon where during supper the gang was entertained with music on Ray's hi-fi equipment. The winner for the evening was Ray Price with Ray 3KD as navigator, those two will have to be handicapped. Second was Roy 3ARY and third was Tom 3AOG with XYL Vi as navigator. Many thanks to Ray and his mother for making their home available to us to finish off a pleasant evening.

The City-Country Get-together of the V.h.f. Group was again a great success. The attendance was wonderful, in fact we had difficulty in finding seats for everyone. There was a particularly large representation from the Ballarat district and those from the country who made the trip included 3ZBB, 3ZL, 3AMH, 3ARI, 3ZBS, 3ZAT, 3PO, 3VV, 3GM, 3VA and 3DS. The Geophysical Year was discussed and a recording made by "Unesco" on the event was played and a number of 6 mx stations promised their support. Any other 6 mx stations who could assist in this project, which will be running from 1/7/57 to 21/12/58, are requested to send their names to 3LN. In the main this will consist of observations of signals on 56 Mc. whose great circle path extends southwards and which could be affected by auroral phenomena.

V.h.f. records were also discussed and the best known records, which will become the Victorian State records, were: 288 Mc.—3GM on Mt. Bunninyong to 3ZBK-3AAP on Mt. Dandenong, a distance of 80 miles. 144 Mc.—3BW at Portarlington to 2WH at Forbes, a distance of 403 miles.

The winner of the third V.h.f. Field Day was announced, this was Reg 3ZAD, closely followed by George 3GM second, and Len 3LN third. Two short lecturettes were then enjoyed. The first was given by Ian 3ALZ on his 2 mx gear, and the second by George 3GM, who had brought along his 4/4 collapsible beam which he uses on field days. A most enjoyable and friendly evening then concluded with a bite of supper and a cuppa to warm up the country visitors before they set off on their long journey home.

George 3ZCG, who is endeavouring to get himself established at his new QTH at East Newborough in the Gippsland area, is using a three el. yagi until his 16 el. array is completed. He is at present busy building a xtal locked converter to feed into his AR7. He is keenly interested in mobile work and has a collinear stacked vertical antenna for working mobile on 288 Mc. as well as a quarter wave whip. The tx side of his transceiver is a mod. osc. with 3.4w. input to a CV6. He hopes to make a trip to Melbourne soon to make tests from Mt. Dandenong and Mt. Donna Buang on 1 mx.

Ian 3ZAM, who is doing a two-year electronics course in England, hopes to be lucky enough to manage a short break away from hard studies to do a six-weeks' tour of the continent by car with four friends. We hope he makes it, it certainly wouldn't be hard to take. A new call being heard on 2 mx is that of Leo 3XO. Leo, however, is by no means a new call in Amateur Radio, he's one of the real old-timers. He is making plenty of contacts using a dipole, but is looking forward to even better results when he gets his five el. beam erected. Another new call on 2 mx also is that of Ian 3ZDG. There's two more stations for those trying to get their 100 contacts' certificate.—Phyl Moncur.

D.X.C.C. LISTING

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK4FJ	21	186	VK3JD	1	155
VK3ATN	26	177	VK4KS	9	152
VK3BZ	3	176	VK6KW	4	150
VK4HR	12	176	VK3LN	11	141
VK6RU	2	170	VK4RW	23	141
VK3EE	10	163	VK3AWW	14	140

Amendments

VK4DO .. 15 120

New Members

VK5CE .. 34 101 VK3VQ .. 33 100

C.W.

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK3BZ	6	222	VK3CX	26	185
VK4FJ	29	216	VK2EO	2	183
VK3FH	15	215	VK5BY	45	181
VK4HR	8	206	VK4EL	9	175
VK3XU	48	201	VK3CN	1	163
VK3KB	10	200	VK6RU	18	161

Amendments

VK4DO .. 20 145

New Members

VK2OI .. 49 108

OPEN

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK3BZ	4	231	VK3JE	12	198
VK2ACX	6	225	VK2NS	16	195
VK4FJ	32	224	VK3HG	3	181
VK4HR	7	221	VK4EL	10	175
VK3XU	61	209	VK6KW	13	171
VK6RU	8	204	VK2DI	2	170

Amendments

VK4DO .. 15 170

New Members

VK3VQ .. 46 127 VK5JT .. 63 102

FEDERAL, QSL, and DIVISIONAL NOTES

FEDERAL

Fed. President: W. T. S. Mitchell, VK3UM.
Fed. Secretary: L. D. Bowie, VK3DU, Box 2611W, G.P.O., Melbourne.
QSL Bureau: R. E. Jones, VK3RJ, 23 Landale Street, Box Hill, E.11, Vic.
Awards Manager: A. G. Weynton, VK3XU, 5 York Street, Bonbeach, Vic.

NEW SOUTH WALES

President: Jim Corbin, VK2YC.
Secretary: Harry Hickin, VK2ACH, Box 1734, G.P.O., Sydney.
Meeting Night: Fourth Friday of each month at Science House, Gloucester Street, Sydney.
Divisional Sub-Editor: Stan Bourke, VK2EL, 17 Clisdell Ave., Canterbury.
QSL Bureau: J. B. Corbin, VK2YC, Box 1734, G.P.O., Sydney (Inwards and Outwards).
Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHH, Ryan Ave., West Kempsey; **Newcastle:** Les Sparke, VK2AOR, 18 Kahibah Rd., Highfields, via Adamstown; **Coalfields and Lakes:** H. Hawkins, VK2YL, 9 Comfort Av., Cessnock; **Western:** W. Stitt, VK2WH, "Cambijowa," Forbes; **South Coast & Southern:** E. Fisher, VK2DY, 2 Oxlade St., Warrawong; **Sth. Western:** J. W. S. Edge, VK2AJO, Wallace St., Coolamon; **St. George:** Chas. Coyle, VK2YK, 84 Carlton Cres., Kogarah; **Western Suburbs:** Barry White, VK2AAB, 33 Flavelle St., Concord.

VICTORIA

President: G. Dennis, VK3TF.
Secretary: F. G. Bail, VK3YS.
Administrative Secretary: Mrs. May, C.O.R. House, 191 Queen St., Melbourne.
Meeting Night: First Wednesday of each month at the Radio School, Royal Melbourne Technical College.
Divisional Sub-Editor: Phyl Moncur, 235 Union Road, Ascot Vale.
QSL Bureau: Inwards and Outwards—W.I.A., 191 Queen St., Melbourne, C.1, Vic.
Zone Correspondents: Central Western: W. J. Kinsella, VK3AKW, Magdala, Lubeck; **South Western:** W. Wines, 48 Cranley St., Warrnambool, and W. Zimmer, VK3AWZ, 70 Skene St., Newtown; **North Eastern:** A. D. Buchanan, VK3FD, "Booroondal," Wahring; **Far North Western:** M. Folie, VK3GZ, 101 Lemon Ave., Mildura; **Eastern:** J. Spark, VK3AJK, 20 Marshall Ave., Moe; **North Western:** C. Case, Cumming Ave., Birchip.

QUEENSLAND

President: Frank Bond, VK4ZM.
Secretary: W. J. Rafter, VK4PR, Box 638J, G.P.O., Brisbane.
Meeting Night: Fourth Friday in each month at the State Service Union Rooms, Elizabeth Street, Brisbane.
Divisional Sub-Editors: F. B. Bond, VK4ZM, and W. J. Rafter, VK4PR.
QSL Bureau: Inwards—J. Files, VK4JF, Wanda St., Buranda; Outwards—Miss Clair O'Brien, 93 Jardine St., Stafford.

SOUTH AUSTRALIA

President: W. J. Bulling, VK5KX.
Secretary: B. W. Austin, VK5CA, Box 1234K, G.P.O., Adelaide. Telephone: UX 2621.
Meeting Night: Second Tuesday of each month at 17 Waymouth St., Adelaide.
Divisional Sub-Editor: J. M. Coulter, VK5JD, 69 Conmurra Ave., Ackland Gardens.
QSL Bureau: Geo Luxton, VK5RX, 27 Belair Rd., West Mitcham, S.A. (Inwards and Outwards).

WESTERN AUSTRALIA

President: F. A. T. Tredrea, VK6FT.
Secretary: J. Mead, VK6LJ, Box N1002, G.P.O., Perth, W.A.
Meeting Place: Perth Technical College Annexe, Mounts Bay Road, Perth.
Meeting Night: Third Tuesday of the month.
Divisional Sub-Editor: J. R. Elms, VK6BE, 29 Central Road, Kalamunda.
QSL Bureau: Jim Rumble, VK6RU, Box F319, G.P.O., Perth, W.A. (Inwards and Outwards).

TASMANIA

President: F. J. Evans, VK7FJ.
Secretary: M. Hurburgh, VK7MH, Box 371B, G.P.O., Hobart.
Meeting Night: First Wednesday of each month at the W.I.A. Club Room, 147 Liverpool St., Hobart.
Divisional Sub-Editor: H. J. Bracken, VK7BR, C/o. P.O., Bronte Park.
QSL Bureau: K. A. Johnston, VK7RX, 34 Tower Rd., Newtown.
Zone Correspondents: Northern: K. J. Briggs, VK7LX, 18 Melbourne St., Launceston; **North Western:** S. H. Pattison, VK7UW, 36 Mark St., Burnie., Tas.

PAPUA—NEW GUINEA

President: F. M. Nolan, VK9FN.
Secretary: D. F. Lloyd, VK9OQ, C/o. O.T.C. Receiving Sation, Port Moresby.
Divisional Sub-Editor: R. B. Monfries, VK9RM, Wau, T.N.G.
QSL Bureau: D. H. Beadel, VK9DB, C/o. P.O. Box 107, Port Moresby.

FEDERAL

FEDERAL COUNCILLOR IN VICTORIA

Yet another change of Federal Councillor comes to notice. Mr. Dave Wardlaw, VK3ADW, has taken over the duties from Mr. Russell Bradshaw, VK3SX. Dave is well known for his efforts in various contests and all will wish him success in his new sphere.

BAND CHANGE IN GREAT BRITAIN

The Radio Society of Great Britain has been advised by the G.P.O. that the International implementation of the Atlantic City high frequency broadcasting bands is now under consideration and that the International Telecommunication Union proposes to recommend a target date of 1st March, 1956, for clearing other services from the bands allocated exclusively to broadcasting. This will necessitate withdrawing from Amateurs the use of the 7150-7300 Kc. band and restricting their 7 Mc. operation as from 1st March, 1956, to accord with the Atlantic City allocations, i.e.:—

7000-7100 Kc. exclusive use.
7100-7150 Kc. shared with broadcasting (in which broadcasting has priority.)

INVITATION TO U.K. VISITORS

The London Members Luncheon Club of the Radio Society of Great Britain has requested Federal Executive to inform members of the W.I.A. of a standing invitation to their monthly get-together. This informal meeting of members of the R.S.G.B., usually on the third Friday, takes place at the Bedford Corner Hotel, Bayley Street, Tottenham Court Road, London, W.1, and they would be delighted to have as guests any members of the W.I.A. who happen to be visiting England.

A telephone call to the Secretary of the Luncheon Club, Mr. Frank Fletcher, G2FUX, at Ruislip 2763, or R.S.G.B. Headquarters, Holborn 7373, will help in getting acquainted. Alternatively, a letter to Mr. Fletcher at 11a Ickenham Road, Ruislip, Middlesex, will receive prompt attention.

Federal Executive hopes that any members travelling abroad will avail themselves of this facility and thus tighten the bonds between the R.S.G.B. and the W.I.A.

— • • • —

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Alan McLeod, VK3AHM, forwards for information the cover of a letter he forwarded to 3W8AA, and which has been returned to him from Hanoi. The only endorsement borne by the envelope is in handwriting and appears to read "Inacheminalue." Does the return of this card mean that "Phan" is short for "phan-(tom)?"

The V.E.R.O.N. staged their P.A.C.C. contest during last week-end in April (c.w.) and first week-end in May (for phone). Like most of the European societies who stage DX contests, insufficient advance information is given to enable the event to receive the requisite publicity. Logs are due with the V.E.R.O.N., Keizerstraat 54, Gouda, Netherlands, by 15th June.

The many VK stations who have in the past two years made contact with Dominik Reichmuth, HB9IX/MM on 7 and 14 Mc. c.w. will be interested to read that he has resumed life ashore. During his voyages Dominik visited Australia thrice and was much impressed with what he saw of VK. He has QSLed all contacts, but anyone who missed out will receive a duplicate on application to him care Overseas Telephonic P.T.T., Sedeilles, Switzerland.

A number of VK stations contacted SM8AIS during the period Dec. '55 and March '56. The call was used by Gunnar Nilson, of Karlskrona, Sweden, while aboard H.M.S. Gotland during a training cruise from Gotherburg to Luanda (Angola) and return. A very attractive QSL card was issued for the occasion and Treb BERS195 reports that some have reached VK. (Mine is unsighted so far, but that's nothing new as QSL Managers invariably have a battle to get their own cards.)

The following change of address is reported for the KZ5 QSL Bureau, which is now located: KZ5KA, Catherine Howe, Box 462, Balboa Heights, Canal Zone.

Enquiries are coming in soliciting QSLs from VK1DC, VK1HH and VK1ZM of the 1955 Macquarie team. Enquirers appear to think that the boys have had enough time to catch up on their "home work," and get around to QSLing.

Jack Elliott, ZL3CC, spent six weeks in Australia during April/May. Jack, who is no stranger to this country, having been here twice previously, had a good run around VK2, VK4, VK5 and VK3 in that order. Jack, who is holding back the ravages of time very successfully, said he was happy to meet us, sorry to part, and will be happy to meet us again.

It is with regret that I record the passing at end of March of Dick Rowe, ZL3GR. Dick, who had never had a day's illness and who regularly played competitive tennis, died at the age of 48 after a few hours illness following a sudden thrombosis seizure whilst at a function. Dick was one of three Amateur brothers. Elder brother, ZL3GB, passed on ten years back, whilst surviving brother is Harold ZL3JA, of Christchurch, well known to DX men on 14 Mc. To him we extend our sympathy in his loss.

Tasmanian Amateurs are endeavouring to arrange an Olympic Relay of greetings from Mt. Olympus in Greece to a VK7 station near Mt. Olympus in Tasmania, on the occasion of the opening of the Olympic Games in Melbourne in November. Under the sponsorship of Lon Jensen, VK7LJ—a real old timer—they are sparing no efforts to bring their plan to a successful conclusion.

— • • • —

FEDERAL AWARDS

W.A.V.K.C.A.

Additional certificates have been awarded to PY2CK, JA8AA, VS6CG, and CE3DZ. Total certificates isued to date, 31.

Readers are asked to note the new address of the Awards Manager: G. Weynton, VK3XU, 5 York Street, Bonbeach, Vic.

— • • • —

NEW SOUTH WALES

The New South Wales Division held its Annual General Meeting at Science House, Gloucester St., Sydney, on Friday, 27th April, 1956. Although the attendance of approx. 85 was rather dissappointing, those who attended enjoyed the discussions on a wide range of subjects which followed the adoption of the annual report. The following members, being the only nominees, will comprise the Council for the coming year: Vince 2VC, Jim 2YC, Barry 2ZAG, Ed. 2EN, Harry 2AHP and Barry 2AAB. We were pleased to welcome the "Happy Wanderer," Dave 2AYE to the meeting, also 2AEU, of Lismore.

In reviewing the year, President Jim 2YC spoke of two very gratifying results of the Institute's year in VK2. The first of these is the unquestioned rise in the status of Amateur Radio in the eyes of the general public—the New South Wales Division's Emergency Network gaining official recognition in the State Emergency Scheme—and the rise in membership, which is now close to the 800 mark again. The highest membership ever in this Division was 860, so let's see if we can make it a record year.

Congratulations to Frank 2APF, of Tamworth, for some really good long-distance, low-power contacts on 144 Mc., and to Jack 2ADT, of Inverell, for emulating Major 2RU's splendid example in working that long list of JA stations. Jack reckoned that the 28-day sunspot cycle would bear watching and the result was 17 JAs in a couple of hours with three watts and the trusty old zepp, just 28 days later than Major's effort. By the time this appears in

print we will know whether it came around again!

Congratulations also to the operators of 2AQJ/Portable and to Max 2ARZ on winning the outright (open) and N.S.W. (c.w.) sections respectively in the 1956 National Field Day. Nice work!

HUNTER BRANCH

The University of Technology was the location of the April meeting of the Hunter Branch, held on 13th April. Three lecturettes had been arranged for the meeting, and these were delivered by, firstly, Doug 2ADS, who described the construction and operation of his Harmonic Oscillator driving a 2E26 on 144 Mc.; Ken 2ANU and Geoff 2VU, who described the gear used and results obtained in operating "Mobile 144 Mc."; and thirdly, Ken 2KG described his gear and spoke on "Walkie Talkie 144 Mc." This feast of 144 Mc. gear and explanations of techniques used was much appreciated by members present, especially Rodney 2ZBE and Athol 2ZAE.

After the questions and discussion on the lectures had ceased, the matter of making our Blackalls Field Day, held on the Six-Hour Day week-end each year, into a two-day Convention was discussed and decisions arrived at to finalise the matter. The hidden tx hunt at this Field Day will carry a first prize of £10/10/- and a second prize of a Rebecca tx. The first prize in the blindfold tx hunt will be £5/5/-. If these tx hunts are of interest to you, keep the dates in mind—29th and 30th Sept., and follow these notes for further details.

On Easter Sunday Major 2RU worked 13 JA stations on 6. Harry is operating on 15 mx now. Alex 2JZ is working a fair slice of the DX on 20. 2AQR has taken up residence at West Wallsend, but has not yet got his gear on the air. Ron 2ASJ worked three W stations on c.w., using his foot operated key. Alan 2KB has been heard working DX on 20 c.w. Ted 2ABW has been using 2w. portable from the Hawkesbury area; Ted will tell any enquirers how to instal a 66 ft. long straight wire on a 30 ft. long launch. Harry 2AFA is on more at night, now that he is one of our retired gentlemen. Les 2AOR has completed a new modulator and has had good results from it.

For up to date news on the Hunter Branch, listen to 2AWX each Monday night at 8 p.m. on or about 14.05 Mc.

Our June meeting will be held at the University of Technology at 8 p.m. on 8th June. The lecturers at the meeting will be Harold 2AHA, Dave 2BZ and Bob 2KF—their subject, "Portable on 80, 40 and 20 mx."—2AOR.

TAMWORTH

Noel 2ASQ has been busy re-building his final once again, this time with a pair of 6146s in a pi tank and results have been very good so far, yet he cannot beat 2APF for signal reports on 40. Syd 2APS has been heard on a few times on his super dooper. Merv 2ATD has not been on much this month due to pressure of work, but is moving the rig out of the lounge room (order of the boot?). Sam 2ZBL still awaiting his new call, is busy building up something to make a noise on 80 and 40 mx. Frank 2APF had a visit from Bob 2ARG on Sunday. Bob (his two metre gear with him) and 2ARG, 2APF and 2ASQ adjourned to the Oxley Lookout and chased 2 mx signals for two hours. No stations were heard up at the Lookout, but reports later gave 5 x 8 in Muswellbrook (2ANU) and subsequent nightly skeds have shown a permanent opening from 2APF to 2ANU.

On Anzac Day, Hugo 2WH heard a burst from 2APF of very short duration. 2APF wishes to thank Bob 2ARG for the use of his tx and rx, without which these experiments would not have been possible, and all who participated. 2APF has re-built his modulator, now using 807s in AB2 and was sorry to dismantle the original 6L6 AB1 job, which gave such good service for twelve months. Last minute news has been received from Dave 2BZ in Newcastle that 2APF was heard there at excellent signal strength. Power used at 2APF on 2 mx is 10w. input.—2APF.

SOUTH WESTERN ZONE

The arrangements for this year's Convention at Griffith are well in hand, the Committee at Griffith are hard at work with details. Ted 2AXD, at Griffith, has been heard expounding the workings of the AT21; pleased about the xtal mike Ted? John 2ZBY is active on 2 mx from Air Force School at Uranquinty and has had several contacts with your scribe at Coolamon. John has a good sig using 522 tx-rx modified and 4 el. beam. John will be going down to VK3 for some time shortly, so he will be a new one for v.h.f. down there and a loss to our zone here. I hear George 2ZAZ is nearly reading for 2 mx contacts, so it loks like we may hear 2 mx sigs from Griffith soon.

Dr. Rofe, 2HE, is to make a trip to Griffith in May, to talk and demonstrate 144 Mc. gear, so Adrian may liven up the Griffith v.h.f. gang.

Stan Abbey, associate, of Coolamon, has a new set-up, rack and panel rx with band-switched converter 80 to 10 mx, so it looks like Stan is after the DX. Jock Ashley, associate of Coolamon, is also experimenting with antennae on the DX bands; did try a vertical on 21 Mc. I hear you are going to try something else Jock; what, too much car ignition?

Have not heard the Tumut or Wagga gang for sometime. How about a line on what is cooking?—2AJO.

UPPER HUNTER GROUP

During the month Geoff 2VU and Ken 2ANU lectured at a meeting of the Hunter Branch on 2 mx mobile in the endeavour to excite more local activity. How about it chaps? Remember those 522s becoming available.

Roy 2RC at Denman busy negotiating for a farm at Pikes Gap. You will be able to do it all by remote control Roy! Nev 2OS tied up with local broadcast station; given Amateur Radio away altogether Nev? How about 2 mx? Geoff 2VU busy with the paint brush and temporarily QRT as he had to move the rig. Bob 2ARG's airborne mobile created great interest on 2 mx. Received S9 from Sydney to Tamworth by 2ANU and associate Darnell Price, who brought a 2 mx rx home on holidays to Muswellbrook.

Another link has been forged in the 2 mx chain. Ken 2ANU has been copying Frank 2APF in Tamworth each night from 22nd to 29th April. Frank was using Bob's (2ARG) mobile rig and the distance was 95 miles.—2ANU.

EASTERN SUBURBS

2ATA is making quite a dent with his new beam, on the 14 Mc. DX, and in the same area 2AIG is still having lots of c.w. DX fun with his rotary compressed dipole. When are you going to add a parasitic element Ray? 2ASE is not heard much when ordinary mortals (local) are active, for Ernest, who is in retirement, puts in an appearance on 40 mx phone in the small hours, and then catches up on slumber in the daytime. 2DV has been heard netting a little c.w. DX on 14 Mc., and on phone 2YF has appeared for a brief spell.

On 144 Mc. Ivan 2TN was heard for a brief interlude using an indoor contraption he brought back from a visit to U.S.A., known as a "Rabbit's Ears" antenna, otherwise, a contorted dipole. That DX king, Vince 2VA, is getting in some nice overseas QSOs with his new s.s.b. outfit, which is a pleasure to listen to. Makes me wonder why we still tolerate frequency-grabbing carrier waves! Horrie 2FA has completed his new table-top t.v.i.-proofed tx with 1646s in the final, and with his trusty 2 el. array can more than hold his own against quads, rhombics, etc. Bill 2YB was heard for a brief interlude on 40 phone.

2NO had bad luck, being taken ill during his annual recreation leave, but managed to get into the shack for an occasional QSO on 40, 20 or 2 mx.. After being in for 22 years the main pole needed attention, so 2ASE came around and gave a hand to get it down. After it was rendered horizontal, it was found that the hardwood sleeper to which the pole was bolted had rotted completely through. Lady Luck had intervened that time! Tests with indoor skeleton slots and plain dipoles on 2 mx indicate that for contacts around Eastern Sydney, 2NO has no need for outside arrays and considers that with limited activity on two, turning mechanisms can be put to more useful work in the h.f. regions. Dave 2AYE has been ashore for leave and has visited a few shacks. When can we expect to hear from 2AYD marine mobile?—2NO.

COALFIELDS AND LAKES

It's months since we had notes from this zone, however it is hoped to have them in each month in future. Bob 2KF from Kurri Kurri is the only one active there; Bob works most bands, but prefers the v.h.f's; has nice beam, too. Major 2RU, after his 50 Mc. JA contacts, is keeping a close ear on the band for future happenings; works 7 Mc. also. Heard Len 2AMU also from Gosford on 7 Mc.; given the "stars" away Len? It is pleasing to know that Jack 2ADT, an ex-zone Amateur, got among the JAs on 50 Mc. also, collected 17. Jack of course now resides at Inverell.

Geoff 2VU still going strong from Singleton; specialises on 144 Mc. and has Ken 2ANU at Muswellbrook a constant check point on 144 Mc. Cessnock has a new Amateur, Duncan 2MC; has been only active a few times as yet with an AT5. Chris 2PZ active again after long absence, mostly on 7 Mc. and also busy building television rx. Harry 2YL working all bands, 3.5 to 28 Mc., using GO9 unit with very good results; listening on 144 Mc. and hoping to get rig there soon.—2YL.

VICTORIA

Mr. Wally Hunter, of Zephyr Products, was the lecturer at the last general meeting and he gave a general talk and discussion on microphones. He discussed his subject in very great detail and members attending the meeting gained a lot from his talk as was evidenced from the many questions they put to him and which he seemed to be most happy to answer. Among those present was a visitor from G land, George G3JSW, who after being welcomed had a few words to say to the gathering. He told us he mostly works on 21 Mc. Members were very sorry to learn that George 3AG had been involved in a bad motor car accident and had suffered a fractured skull and chest injuries. The following new members were welcomed: L. G. Walters, 3CN (formerly 2ALW), S. R. Brooks, 3ZDB, as full members, and A. C. Stebbing and A. B. Holmes, Associates, and D. G. Stayches, Junior Associate. John Adcock, 3ACA (hero of the Z calls) put forth a motion that Federal Executive be asked to approach the P.M.G's. Department to obtain permission for limited licencees to operate in the 56-60 Mc. band and thus help to populate that band.

At the next general meeting to be held on Wednesday, 6th June, Mr. Campbell, of Masse Batteries, will give a lecture on Storage Batteries. He will also have on display samples of batteries, both lead acid and nickel iron types. In July the lecturer will be Mr. Jack Vertigan, 3WR, who will lecture on Single Side Band Techniques.

The Victorian Division Council has elected the following office-bearers—President of Division and Chairman of Council, G. Dennis; Vice-Presidents, H. Hodge and J. Marsland; Honorary Secretary, F. Bail; Treasurer, J. Marsland; Fed. Councillor, D. Wardlaw; Membership Qual. Committee, H. Hodge and K. Pincott; Communications, H. Charles; Contest Committee, D. Wardlaw and H. Hodge; Tech. Maintenance, F. Bail, A. Elliott and D. Wardlaw; Instrument Librarian, C. Buckingham; Book Library, R. Henderson; 3WI Broadcast Scriptwriter, Phyl Moncur; Disposals Committee G. Dennis and R. Bradshaw; TVI Advisory Committee, H. Hodge; Olympic Games Committee, H. Albrecht and S. Dixon; Class Manager, G. Manning; QSLs Inwards, N. Storck and I. Hunt; QSLs Outwards, I. Stafford and J. McKendrick; Publicity Officer and Div. Sub-Editor, Phyl Moncur; Publications Committee: Editor, J. Marsland; Associate Editor, R. Higginbotham; Technical Editor, K. Pincott; Technical Staff, D. Norman, J. Duncan, R. Fisher, and A. E. Morrison, of Queensland.

80 METRE TRANSMITTER HUNT

A good crowd turned up to the last hunt when Roy 3ARY, assisted by Ray 3KD and Ray Price, hid the tx. The signal was very strong at the starting point and after travelling only a few miles and arriving in the region of the Boulevard, it was very evident from the key-clicks in the rx that the tx wasn't very far away, but from then on it was a really difficult task tracking down that tx. The boys had hidden it well into some scrubby bush high on top of a cliff that runs alongside the Boulevard near Kane's Bridge. They had gone out at 7.30 a.m. to erect the aerial which they strung high across the road and they had to get there early to get it up before all the traffic came along. The three of them had a considerable amount of enjoyment in watching the hunters driving up and down the Boulevard just below where they were hiding. The last part of this hunt was definitely a job on foot as those trying to track down the tx eventually realised and Ed 3EM was first to locate it, followed by 3ALY then 3ZAD. The hunt finished up with a picnic tea down by the river and a camp fire and barbecue.

The next hunt will be held on Sunday, 17th June, when the winner, Ed 3EM, will hide the tx.

BI-MONTHLY SCRAMBLE

The results of the Scramble, held on 2/4/56, are as follows: Winner Section C—3YS, 17 pts.; Winner Section D—WIA-L3015, 7 pts. Logs were received from 3YS, 17 pts.; 3ZBE, 13 pts.; 3AAP, 13 pts.; 3ZAQ, 12 pts. Listeners, WIA-L3015, 7 pts. Checking 3HE and 3ADW.

The next All Band Scramble is to be held on Queen's Birthday, Monday, 4th June. For rules, refer to copy of "A.R." for Sept., 1955.

EASTERN ZONE

Well chaps, only a few more days to the Zone Convention and hope all of you will be there on 2nd and 3rd June at Morwell. The meeting place is at the Church of England Community Hall at the corner of Princes Highway and Latrobe Road. Dinner will commence at 6 p.m. and the Convention proper at 7.45 p.m. During the week-end there will be an inspection of the Yallourn coal mine, briquette plant and power house. It is hoped to have

some visitors up from Melbourne this time, so it should be a great success.

Many stations are still inactive on the hook-up on 80 mx, in fact there are more on the 2 mx hook-ups these days. Ron 3PR still being the main backbone, ably supported by Ian 3AAV, who has 80 and 40 mx gear permanently installed in his car. David 3DY has been coming on the hook-up working mobile with good signals. Jack 3AJK should have his new rig going by now, also on 2 mx.
is all we heard of him, must have been talking in his sleep.

Activity in the zone is still running high, so keep it up chaps. Bill 3TY has gone to Swan Hill, sorry to see you go Bill, and wish you all the best on behalf of the boys. Graham 3QZ is still coming on 80 and 2 mx with good signals. Peter Thorne should have results of exam anytime now so wishing you luck Peter. Terry Phefly, Associate and S.W.L., is getting cards from overseas, likewise is Des Stayches, another S.W.L. and Associate. Well, 73 chaps, see you all at the Convention, we hope.—3AJK.

NORTH EASTERN ZONE

Syd 3CI's v.h.f. beam fell on his cubicle quad and damaged it recently. Ken 3KR worked an FM7 on 20 mx a while back. Bill 3JP is still on that garage and Ray 3FI can now see the shape of things to come in his new shack. Keith 3DW is likely to be tied up during the evening with his new job. Jack 3PF is missing and the Eastern Zone are fortunate as Vic 3ABX has gone to Yallourn. Ron 3AQG now has his three-band tx finished. Howard 3YV is in a little trouble with his latest tx. Jim 3JK is quite active with his equipment to work DX on 10, 15 and 20 mx. Brian 3AMZ has been on 80 mx when studies permit. Gordon 3AGV is expected to be portable, holidaying in the zone. Jack 3AKC has altered his converter to 21 Mc.

Vern 3AXW is quite a follower of the 7050 Kc. zone hook-up at 1330 hours each Sunday. Les 3ALE is quite active and Bruce 3AGG is experimenting with the cubicle quad. Murray 3HZ is busy moving in to that new house now. Des 3CO was expected to spend an interesting annual leave on a trip to Goondiwindi and back. Our Secretary, Assoc. Earle Scoones was away on a study course in Melbourne recently.

The Zone Annual Convention should be held later this month (June) so keep listening to 3WI for further details.—3FD.

FAR NORTH WESTERN ZONE

Activity in the zone is brightening. 3TI has installed an all-band final which is reported to be working satisfactorily on 80 and 40 mx. 3AUG spent many months re-building rx to the 80 and 40 mx band and we hope he will be operating on these bands as well as 20 mx in the very near future. 3AJU has been very quiet for the past two or three months, due to harvesting operations and later holidays in Sydney. 3FC in Ouyen, still busy working DX. 3ZCW also at Ouyen is the two metre king of the zone. Max consistently works 5BC at Renmark, distance of 115 miles airline from Ouyen. From 18th Dec. he has had 65 contacts with Hughie 5BC.

We understand there is a new licence issued in Ouyen to Cor, believe the call to be 3AWT. Congrats. Cor, hope to hear you on the air soon. 3APF has been busy re-building his tx and it is now operating quite well on 40 mx. 3MF and 3SN are too busy to spend any time with Amateur Radio. Have not heard 3AKF on the bands for a long time, used to hear him occasionally on 80 mx. After a silent period of three years, 3GZ was again active on 40 and 20 mx working the odd bit of DX.—3GZ.

SOUTH WESTERN ZONE

The zone is still very active and since the usual Sunday hook-up has been on 40 mx, frequency 7050 Kc., there has been a good number in on it. It is also great to hear Bill 3BU come in on the hook-ups, but there are still more from that area we would like to hear on, so what about it—burn those cobwebs out of the tank coil. 3IC visited 3XI last month whilst on his way through Warrnambool on holidays, sorry I missed out on seeing you Bob. 3ARJ has been having some good QSOs in various parts of the United States on 14 Mc., keep it up John. Although Ted 3PS has been inactive for approx. three years, it is hoped that he will be pushing a little r.f. about the sky shortly so that will be another one returned to the fold.

Jim 3ABT has been heard here at Warrnambool. There is one very important thing that I think you will all agree on and it is how gratifying it is to all zone members to know that we won the Kinnear trophy. Harry 3HF still has his nightly QSO with W1BCR and W4DPI. Les 3DX has been cleaning his shack up so may hear him in the near future. Would like to have one of the boys from Ballarat come on at 10 o'clock each Sunday on the hook-up, so how about it chaps? 3XI and 3ANQ would like some of the Melbourne boys to shoot a signal on 144 Mc. towards Warrnambool. Leigh 3II, who is en route to the Northern Territory, has been contacted a few times by 3AGD, but he won't be on again for a while as the Type 3 is in his car on the railway. Also Maurie 3AMA is to join him on the return trip.—Bill Wines.

GEELONG AMATEUR RADIO CLUB

A very enjoyable evening was held in the club rooms recently when Mr. J. Fisher entertained members with a description of a recent journey to Central Australia. Many coloured slides accompanied his talk and the section on Ayers Rock was particularly interesting. The President, 3AJF, suitably responded on behalf of members. Bill 3BU is to give his "movie" evening of current club happenings on 20th June. All friends and members are cordially invited to view the screening in the club rooms at 8 p.m.

The activity on 2 mx continues to expand and many Melbourne stations are being contacted—3XH, 3AWZ and 3ZAV are anxiously tuning the band most nights about 9 p.m., but the only stations heard often are 3ZBE, 3ZAI, 3BQ, 3ALZ and 3ALY. What about turning the Melbourne beams west, our rx's are good enough to receive you.

Members here are greatly impressed with the improved "A.R." of May last and are in full accord with any proposed changes. Now that new regulations permit freer use of portable equipment, Geelong members would like it known that at least four portable stations will be in operation on 80 mx on the hour each Sunday afternoon in future. What about a few contacts?—3AWZ.

MOORABBIN RADIO CLUB

The club's last meeting was held at the club rooms on 20/4/56, about 25 members being present. Jack 3RV lectured on his v.h.f. activities up at the Eildon Weir project. Jack explained how the v.h.f. hook-up kept the wheels turning up at Eildon to split second timing. The meeting wound up with the usual supper and natter. Thanks, Jack.

The following week one of the club members, Maurie 3AMA, set off from Geelong with Bob Andrews in Bob's Landrover to go cross-continent (mobile on 40 and 80 mx) via Broken Hill, Charleville, Cloncurry, Tennant Creek and finished up at Alice Springs for the Rev. John Flynn's memorial opening of a church in his memory. Keeping in constant touch on the Amateur bands with VK3 Amateurs, Maurie also had a special permit and xtals to operate and keep in touch on the Flying Doctor frequencies (an old job familiar to Maurie's early career in radio). Tom 5TL at Alice Springs passed on all progress reports on the later leg of the trip.

— • • • —

QUEENSLAND

BRISBANE AND DISTRICT

This month's issue has caught us by surprise so please excuse us if we don't give you as much as you want. Winter is drawing on and the temperature is on the way down to the seventies (VK3 Division please note). One consolation, DX conditions are on the up grade on most of the h.f. bands. Some remarkable things are happening, with the events on six metres being the most remarkable.

"A.R." let all licensed Amateurs in VK know that we are now on five metres. Unfortunately, all the boys aren't W.I.A. members and activity continued on six. Then it happened! Six opened with a vengeance and, of all things, the JA stations started to roll in and as no one had been informed officially, everyone with six metre gear got on and "worked DX on six." The quaint part of it, most of the JAs were using antennae for cross-town QSOs and hardly any had directive arrays. Well, the lucky few, who usually pass their time with cross-town QSOs on six, were up to their necks in DX. This should be a good argument for six metres to stay in Amateur hands. If there had been any t.v. stations active on Channel 1, just imagine what those signals would have done to the "pretty pitchers."

Talking about DX on the "a.c. bands," your Secretary called into Jack 4JO's QTH around 7.15 a.m. on the way to work. Jack put his head out of the window and beamed "I've just been working DX." When asked what DX he worked he replied "a station in Maryborough" and this brought the "d.c. band" man's reply "That's not DX." "It is on two mx" said Jack with his mouth spread from ear to ear in an immense grin.

The h.f. bands have been mighty good with DX just pouring in—the sunspots, you know. At the annual dinner, Prof. Webster answered a question that had been puzzling 100 per cent. of your sub-editorial staff. When the solar explosions occur we have black-outs on the bands, but we look forward to sunspot activity for good conditions. Now here's the score, the solar explosions, or Derringer Flares to give 'em their real scientific name, cause a great stream of cosmic rays to approach the earth. The cosmic rays bombard the ionosphere and cause the D. layer, which is the layer nearest to the earth, to become highly ionised and this saturation of the D. layer causes the radio waves from the earth to be absorbed instead of reflected or pass through to higher layers to be reflected. Well, during the short period at sunrise and sunset when all the layers come together, the D. layer, being a generous type, and being saturated with ionisation, passes on its "charge" day by day until the generous one becomes normal and the upper layers are "recharged." Well, you know what happens then, we're in business again.

Although Ipswich is not heard in Brisbane unless the skip is extremely short, we can hear stations further away working the gang in Ipswich. One Ipswich station is working 'em and that station is 4YA—good to know you are active again, Bill. Get on 40 or 80 and say a few words to your Brisbane pals. I wonder if any of the Ipswich gang will be at the Queen's Birthday long week-end down at the South Coast for the Convention. We will be seeing you fellows.

A visitor to the last general meeting was Les 4NV who had a remarkable little transistorised device. A hearing aid with a built-in broadcast rx. Les, who is a G by birth and now a VK, had just returned from a business trip over to the Continent and brought quite a lot of new hearing aid gear back with him. Another visitor to the meeting was Peter 4EB who has just gone into double harness and now has an XYL. Again, congrats, Peter.

Well, that's it, gentlemen, hope you aren't disappointed with our effort, but we are still suffering from the "after-effects" of the rain. —4ZM and 4PR.

TOWNSVILLE

There was quite a nice crowd at the April monthly meeting of the T.A.R.C. and real nice to see some new faces and quite a few of the old timers sent along an apology. After quite a discussion on finance, it was decided to make the next meeting a film one and a small donation is expected from each to help defray cost of returning films by air freight. Two students of the classes breasted the barrier at the last A.O.C.P. and here's hoping that they will be successful.

Eric 4EL gives 21 and 28 Mc. a doing and has worked 114 countries on 21 Mc. Don 4PW from Yeppoon was a visitor to Townsville disposal sale, but did not buy, decided the money better spent on a holiday. Visited the writer's shack and much impressed by the water pipe mast for 2 el. beams. Vern 4LK had his wish fulfilled first week in May by working into Japan on 50 Mc. Bob 4NG had over 15 QSOs before band faded. Remember a few months ago when Japan reported hearing sigs on 50 Mc. and all the boys were trying to break through. Well first week in May quite a number of VK4s and a couple of VK2s managed QSOs before we lost this band altogether.

Norm 4NT put his rig on for the benefit of Mareeba Arts and Hobbies Fair and worked all and sundry. Allan 4BE out helping Bob 4RW to try and tame his 807 p.p. final on 10 mx, but still not OK, still taking off. Ken 4XD, of Cairns, opened up on skip on 14 Mc. and worked into Townsville to renew old acquaintances. Sorry to report that Ed 4WH is laid low with gall stones. Hope you are soon about Ed as they can be very painful. 4WI news coming in real well of a Sunday morning now, but not sufficient in the hook-up after. What about it boys, no news this month from Mareeba, Atherton and Cairns.—4RW.

— • • • —

SOUTH AUSTRALIA

The general meeting was held on the usual second Tuesday of the month and once more there was a grand roll call of members. John 5KX, the Div. President, was in the chair and after welcoming the visitors, he introduced the lecturer for the evening, Mr. Rob Gurr, 5RG. Rob took as his subject, Single Side Band Exciters and after outlining the advantages of using this form of transmission, proceeded to delve into the technical considerations. He discussed particularly the use of the xtal-lattice type of filter incorporating FT241A type harmonic xtals operating on their fundamental frequencies. By choosing adjacent channel xtals in the usual bridge circuit, two xtals will produce the necessary attenuation per stage that is required to achieve the suppression of the upper or lower side band. Rob has chosen 440 Kc. as his centre frequency in the exciter that

he produced (unwired in a new chassis and layout) for the edification of members. He contended that he would achieve similar results with the 10w. s.s.b. that he was now getting with 100w. a.m. By using frequencies around the 455 Kc. mark, i.f. transformers can be used for interstage coupling. The vote of thanks to Rob was carried with good volume of applause.

Following the smoko and distribution of QSL cards by George 5RX and Joe 5JO, the minutes of the previous meeting were read and confirmed. The old hairy one of 50-56 Mc. was brought out, dusted and given an airing. This can now be laid respectfully away following the receipt of notification from the Department last week. A much more disturbing matter that Amateurs had better do some real thinking on is the change from 144 to 146 Mc. This band is really an International band where 50 Mc. was a Regional Agreement! You are also urged to complain bitterly about the **pirating** of the 7 and 14 Mc. bands by commercials. Federal Executive needs all the information it can obtain to substantiate any claims which it will certainly make to the authorities. Send any loggings to me and I'll forward them on: date, time, and type of transmission are reqiured. If you have any testing to carry out, settle on the commercial's frequency! Make quite sure that the interference is not second channel effect due to inadequate r.f. selectivity.

There has been quite a discussion in technical circles on the misused term "splatter." This can be caused by a variety of troubles ranging from de-tuned p.a's. to sharp cut-off tubes in the rx r.f. stages! If you are really confident that your tx is free from all the ailments that beset the average tx from time to time, then what about writing up your testing and checking equipment for "A.R." and describe why you are so sure!! There is a monitoring station in **every State** as well as an Amateur Advisory Committee and reports on signals can be initiated from **anywhere in Australia.** All such reports are forwarded to VK5 Amateurs from the Adelaide headquarters.

Now that t.v. licences are available to Amateurs, I wonder if Sid 5ME will be the first on in VK5. Congrats. on the t.v. certificate OM. The b.b.s.s. will have to look out, Warwick, with these up and coming youngsters!! Anyone got a spare camera tube for 5WI?

NORTHERN AREA

Amongst visitors to the shack of 5WI this month was John 5ZAZ, who was citying to assist as best man to another from Blinman. John has been horse-riding round the sheep station and finds the peace of the outback preferable to the racket of city life. He is hoping to drop the Z as soon as possible.

Thursday nights at 1900 hours a slow morse session comes from the inland chaps and the frequency has had to be shifted slightly higher than 3504 Kc. because of interference.

5WC with Bernie at the mike was pouring a good signal down my feeders. Also Ern 5EN at Pirie had apparently cleared up the trouble of a few weeks ago and together with Comps 5EF and Les 5AX we had a really fine net for an hour. Les went mobile and managed to put an S5 signal into Adelaide from a loaded whip and 2w. input to the final. Ron 5AP on the job on Sundays and earlier in the month we had quite a net with Rex 5UF adding to the gathering. Ron 5FY, Hon. Sec. of the Woomera Club, reports that there are 12 members in the club now with call signs, 5FF, 5QW, 5JE, 3ARO, 5ZAS scattered between them. Ron is preparing a story for "A.R." on the club which will give you some idea of how they have progressed over the last three years.

Correspondence to the Club can now be sent to P.O. Box 38, Woomera. Ray 5FF found it necessary to resign from office and the new President is Keith 5ZAS, with Bernie 5QW as Treasurer. Ray 3ARO and Sid Murphy together with Ron make up the committee for 1956.

EYRE'S PENINSULA

From Lincoln Wally 5DF made an appearance recently using pr. 866s previously reported "one blue and the other red in the phase." Says that DX is good, but fishing is better and he'll stick to 50 cycles and fire-fighting! No news regarding the others so gather that either DX or dishes has got them fixed up. Haven't heard a word from Bert 5DR at Cape Borda, but maybe will work you again over the holidays—whose did you say? Mine, of course. I'm always on holidays, like Doc and Bram—they're touring the "Apple Isle," so stand by VK7.

SOUTH EAST

Take a look at the weather charts for Tasmania Erg and you'll soon find out who is the weather "Jonah," Doc or Joe. Apparently Charlie 5ON had a restless night when camped at Pt. MacDonnel due to, so he thought, "them there so and so semi-trailers with open exhausts." It couldn't have been that bad Joe, or you would have woken yourself up with your own snoring.

Claude 5CH brought along the new power supply for his proposed modulator to show and describe to the chaps at the monthly meeting —a really classy job was the vote. Looks like you mean business, Claude, pair of 813s, eh? Stuart still "Zephyring" about with little time to spare for the air—seems he might be running out of countries to work. John 5FD has gone motor cycle racing—only five spills during his last effort and is showing the strain somewhat, hobbling around at work. Col 5CJ has been heard on 40 mx occasionally, even up here too Col, but haven't made a QSO yet. Tom 5TW and Les 5ZAG still get together on the 2 mx weekly round-up with the boys. Bram 5AB is reaping the DX field with his antennae farm: 10 vee-beams and 20 relays or is it 20 vee beams and 10 relays, Bram? Erg 5KU managed a new country and is still listening for more, however very much interested in the construction of a new sail-plane.

Don't forget those technical articles, chaps. Keep them coming in, we are not up to our record yet.—5XU.

— . . . —

PAPUA—NEW GUINEA

Our Secretary informs me that the subs. are rolling in at a gratifying rate, including some who had previously let their membership lapse, so looks like the youngest Division is slowly and surely getting past the crawling stage. Judging by the keenness of some of our councillors we should begin to make our presence felt in forthcoming competitions later in the year. F.E. also advises that they are looking into the matter of us having the short end of the stick on the scoring, particularly in regard to the v.h.f. sections and their multipliers, where we are really out on a limb.

An appreciative note has been received, thanking our Division for a donation towards **VK2WI**, which brings us to the matter of our own rig for VK9WI. Negotiations are well under way by our able Secretary on the application for the maximum of half a gallon, to make the dissemination of news more satisfactory on the weekly Sunday morning round-robins. When this r.f. factory is exporting ergs in the grand manner, it will be a real leap forward in our progress and no doubt be the means of bringing many more into the fold. Particularly pleasing in this direction is the number of associate members joining up; our latest additions being C. Fonseca, better known as Fon to the gang, and I am informed he has a xtal rig all ready and only awaiting his ticket. It is quite a credit to his keenness, considering his isolation up at Lorengau on Manus Island and we all look forward to hearing from you Fon OM. Another new member in the same catagory is Jack Gray, and we would also be pleased to hear from you QT.

This Division also has another radio club, according to press reports in the local publication of news; this time in Rabaul and we look forward to getting the gen. on the set-up and wish the Copra City success in their new venture. Two affiliated clubs with our small membership is real progress in anyone's language.

Incidentally Bill 9BW. I had an interesting QSO with a W recently, and he dug up a photo of the gang at the pre-war convention at the Bulolo power house, and enquired whether yourself, 9RM, 9VG and 9WG of Salamaua were still in the Territory. Boy, what a convention that was; could you ever forget it! If I remember correctly, it went non-stop for the entire week-end, but I couldn't guarantee to go that distance at the next one. How do you think you'd shape up, Bill?

Hope Reg 9ZAL makes the grade for an unrestricted ticket at the next exams. Jim 9AS joins in the hook-ups at every chance. He said 9AU usually QRL on the commercial circuit. 9OQ is now the latest victim to be bitten by the virus and has ticked off the States worked and now has his head down for the balance of the 48. 9DB has only two to go. 9RM has his nose in front for the first time with only one to go. Claude 9TZ is now putting out a consistent signal and in between tankmaking is putting up fancy sky wires to exhale a little extra r.f.; does a really commendable job with his 6v. powerhouse.

Also a letter from 9RC, who bemoans the cold of VK3 land and has not been enjoying the best of health since he left, but still managed to present his credentials to F.E. on behalf of VK9 Division and we are indeed fortunate in having such an able old-timer from the Territory to advise on conditions prevailing within the Islands. We all join in wishing you a speedy recovery Ron and look forward to the day when we can be in QSO with you with the new call sign.

One of the 11-year-old lads of the Wau Radio Club managed to snare a W6 in his first QSO on c.w. and has been speechless ever since. Needless to say, the club QSL was despatched air mail the same day! The rest of the pupils raced back to their buzzers to see who would be the next to qualify for the honour.

We have our general meeting coming up shortly now that 9FN is back from the big smoke (or is it the big wet, Frank?) and again takes the driver's seat for the elections of office-bearers for the ensuing year, including a vacancy for an editor of these notes, as I expect to be going finish within three months. So keep in mind your nomination for the job when they are called for at the general meeting. Let's all get together, and make this a really bumper year after such a good start. —9RM.

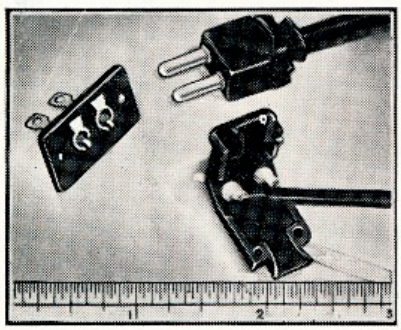
TV for the Amateur

Plugs & Sockets for TV Aerial Terminations by

BELLING AND LEE

A complete range of twin feeder and co-axial transmission line plugs and sockets is provided for Amateur and TV services by Belling and Lee Ltd., as under:

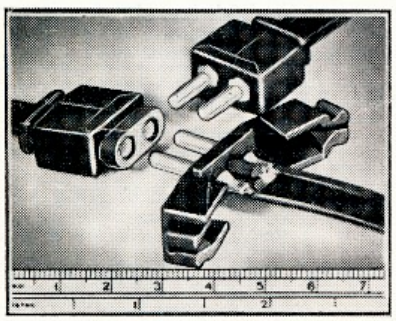
Plugs and Sockets for Twin Feeder



L733/P—Free plug for twin feeder.
L733/S—Fixed socket.

These inexpensive plugs and sockets were designed for use with unscreened balanced twin feeder as employed in television and short wave installations. Accepts 80 or 150 ohm feeders.

L733/J—Free socket. This is similar to L733/P, but is fitted with socket inserts as in L677/J.

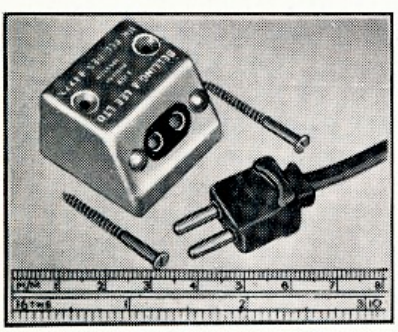


L733/J—Free socket.
L677/P—Free plug for twin ribbon feeder.
L677/J—Free socket.

Designed for use with 300 ohm unscreened twin ribbon feeder as used for short wave work and television. Conductors are pinched in the spills on the solid pins and the "butterfly" type moulding folds over the feeder.

Special slots grip the cover over the cable conductors.

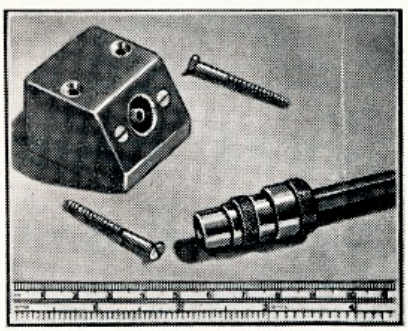
Interchangeable with L733/P and /S, and L739.



L739—Outlet socket box for 80 or 150 ohm feeder.
L791—For 300 ohm feeder.

A skirting board termination for unscreened balanced twin aerial feeder. L733/S forms the outlet socket which will take L733/P or L677/P.

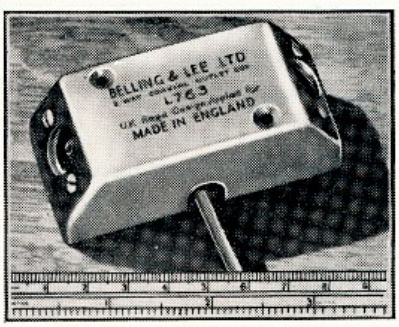
Co-axial Outlet Sockets



L735—Outlet socket box.

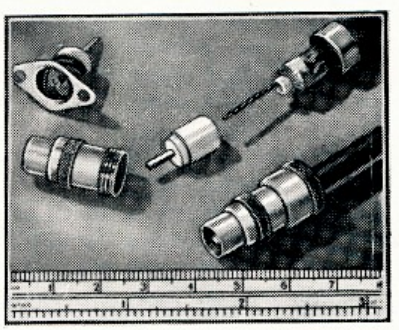
An improved surface mounting outlet box designed primarily for neat termination at the skirting board of television aerial installations. Will accommodate feeders up to 5/16 in. diam. The appropriate range of plus is listed under L1329, L734/P and L781.

This box is also suitable for certain laboratory and test bench installations.



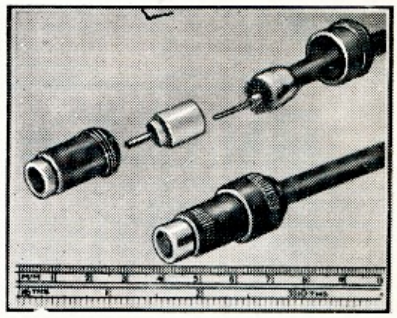
L763—Double outlet box.

This box has two standard outlet sockets and is complete with a "star" matching network which provides the coupling between the incoming cable and the outlets. When two receivers are connected, the input to each is 6 db. down on the input to the box. Designed for use in demonstration rooms, workshops and laboratories, etc., or where neighbours in semi-detached or terraced houses wish to share a television aerial installation. The appropriate range of plugs is listed under L1329, L734/P and L781.

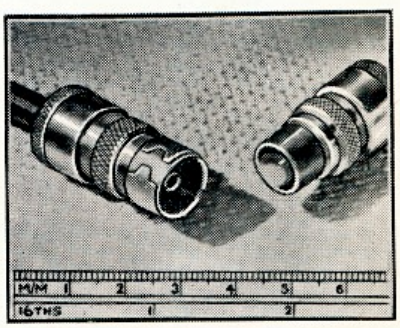


L734/P and L1329—Standard free plugs.
L734/S—Fixed socket.

Co-axial Outlet Sockets



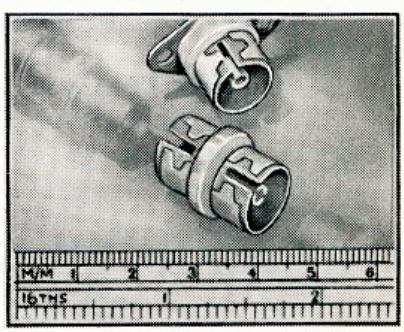
L781/P—Free plug, insulated.



L734/J/AL—Free socket.

Belling and Lee range of plugs L734/P, L781/P and L1329 conform to the draft R.E.C.M.F. Specification for television inlets. In addition to these requirements they are also designed to meet the various recommended methods of correct loading. In L734/P and L781/P the pin is retained in the insulant. L1329 has a hinged moulding to enable the pin to be withdrawn for soldering and/or crimping.

Complementary sockets for above range of plugs are L734/S, L604/S (fixed) and L734/J (free).



L616—Adaptor.
L604/S—Fixed socket.

A particularly useful application is for the aerial input circuit to car radio installations. The co-axial cable designed expressly for this purpose loads perfectly into this lug. The sockets are suitably designed to hold the plug against vibration and are cadmium plated.

The fixed socket L604/S is the complementary mating member to our co-axial plugs. A flush mounting type, L734/S, is also available.

Australian Factory Representatives: **R. H. CUNNINGHAM PTY. LTD., 118 Wattletree Road, Armadale, Vic.**